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Giv

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(54) **TECHNIQUES FOR USER INTERFACES RELATED TO AN EVENT**

(71) Applicant: **Apple Inc.**, Cupertino, CA (US)

(72) Inventor: **Fredrika Giv**, San Jose, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

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CPC ***G06F 3/0484*** (2013.01); ***G06F 3/0481*** (2013.01); ***G06F 3/14*** (2013.01)

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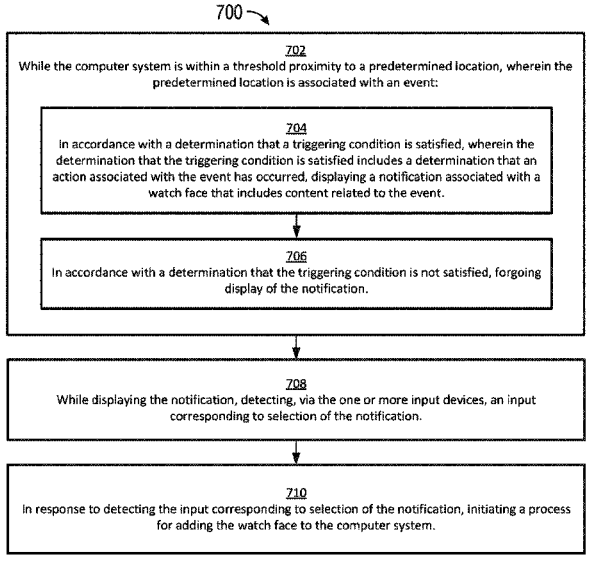
Primary Examiner — Tam T Tran
(74) *Attorney, Agent, or Firm* — DLA Piper LLP (US)

(57) **ABSTRACT**

While a computer system is within a threshold proximity to a predetermined location that is associated with an event, and in accordance with a determination that a triggering condition is satisfied, where the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, the computer system displays a notification associated with a watch face that includes content related to the event. While the computer system is within a threshold proximity to the predetermined location, and in accordance with a determination that the triggering condition is not satisfied, the computer system forgoes display of the notification. While displaying the notification, the computer system detects an input corresponding to selection of the notification. In response to detecting the input corresponding to selection of the notification, the computer system initiates a process for adding the watch face to the computer system.

36 Claims, 13 Drawing Sheets



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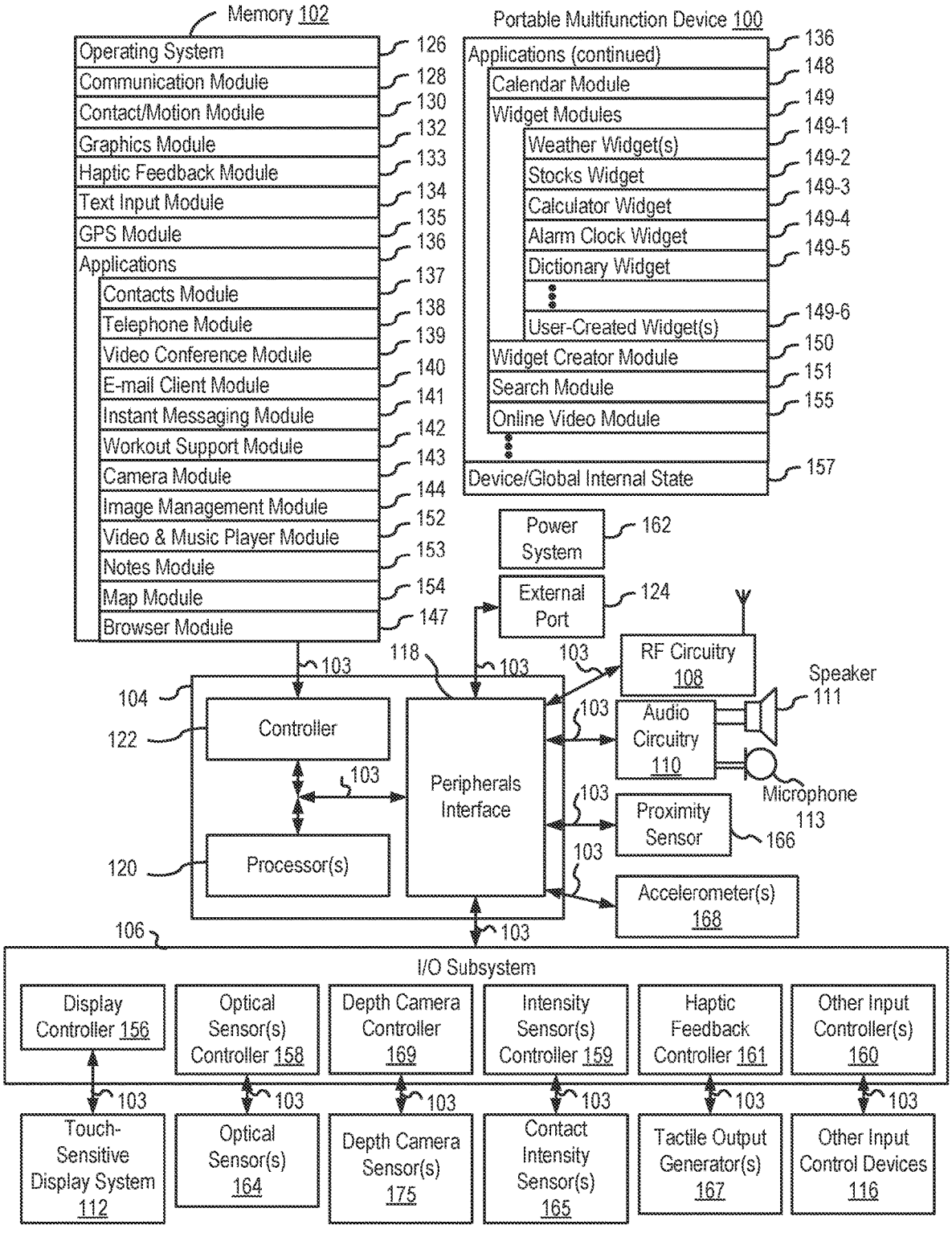
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Search Module 151
Online Video Module 155
Device/Global Internal State 157
Power System 162
External Port 124
RF Circuitry 108
Speaker 111
Audio Circuitry 110
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Intensity Sensor(s) Controller 159
Haptic Feedback Controller 161
Other Input Controller(s) 160
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FIG. 1A

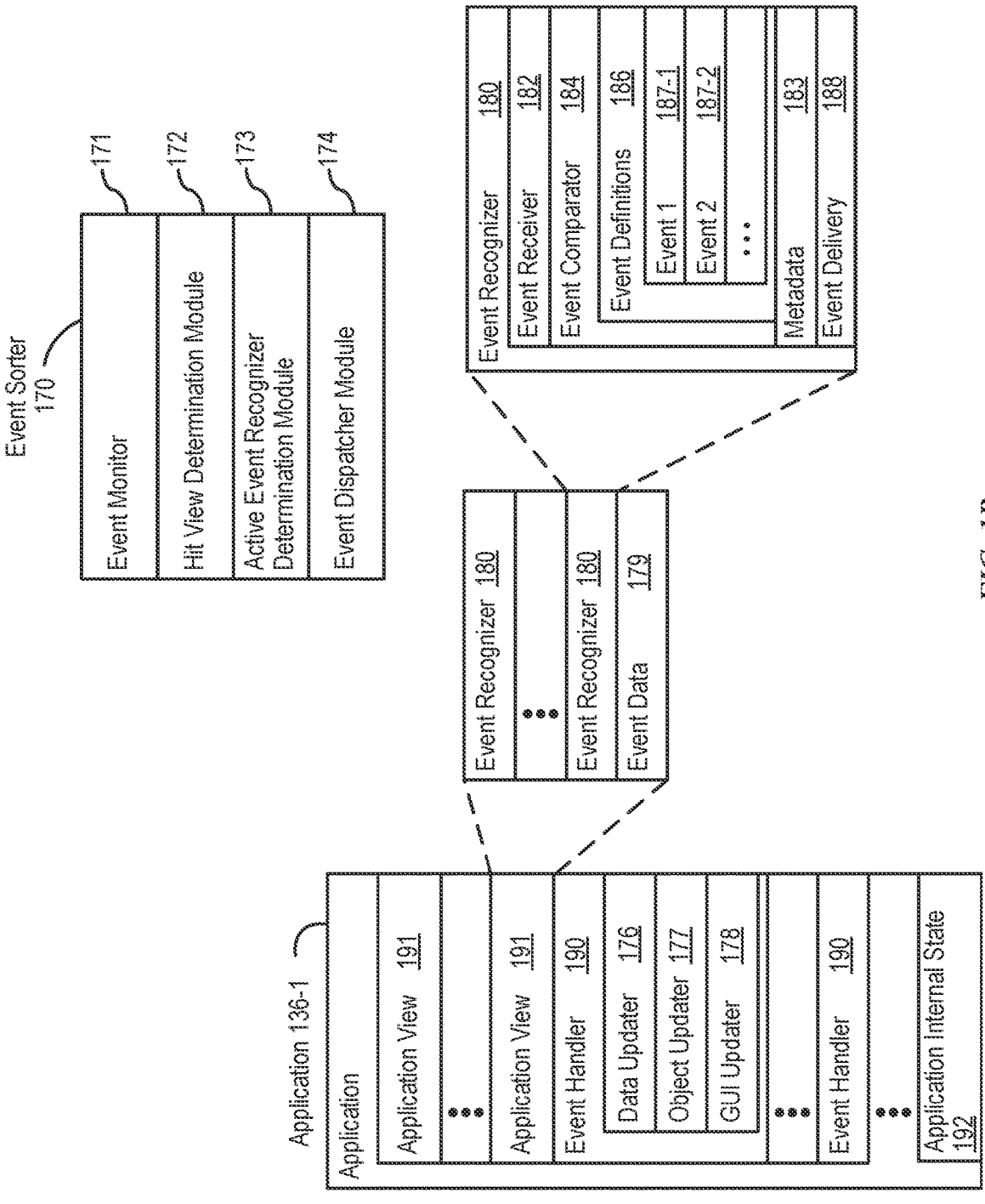
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FIG. 1B

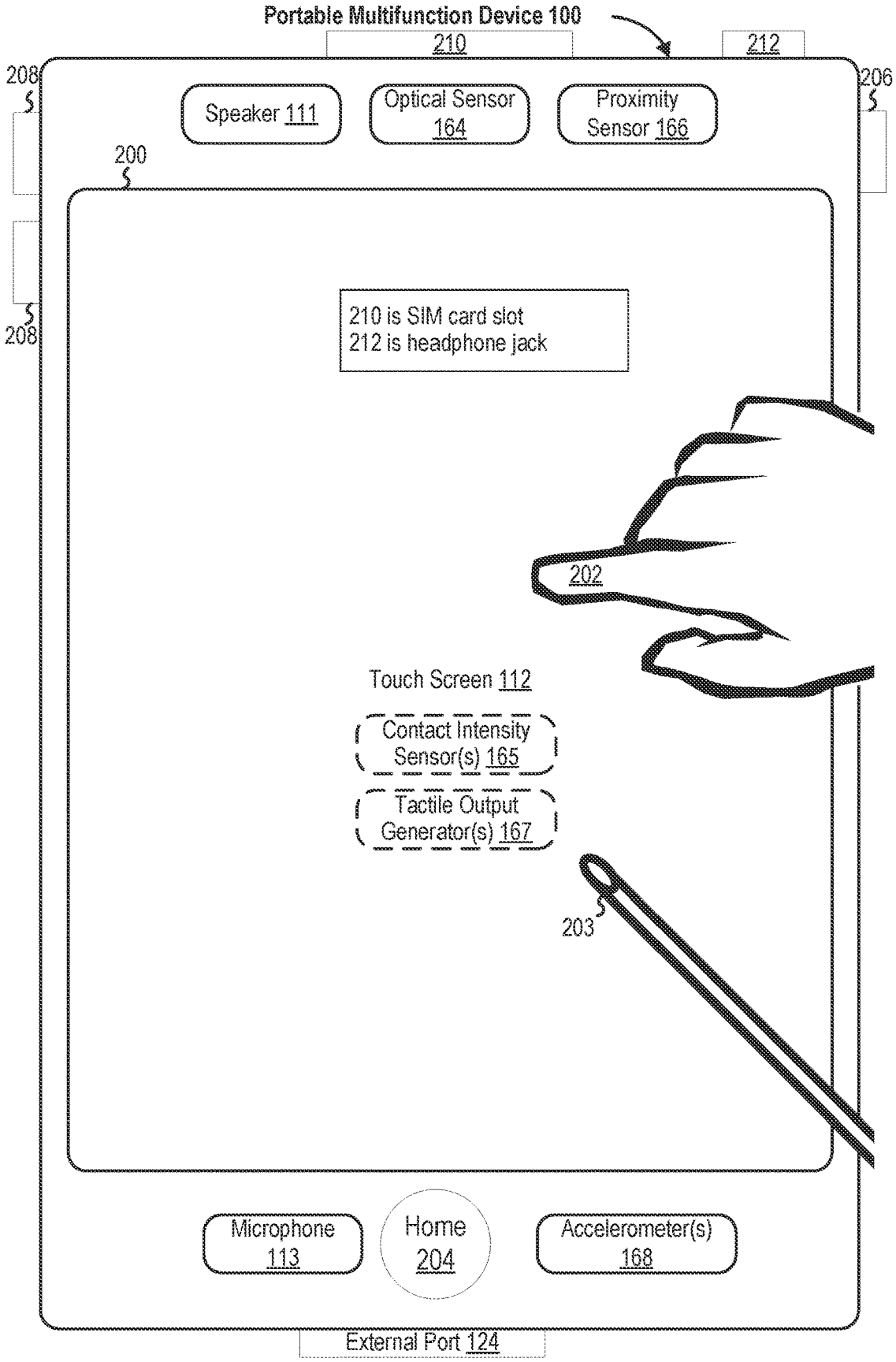
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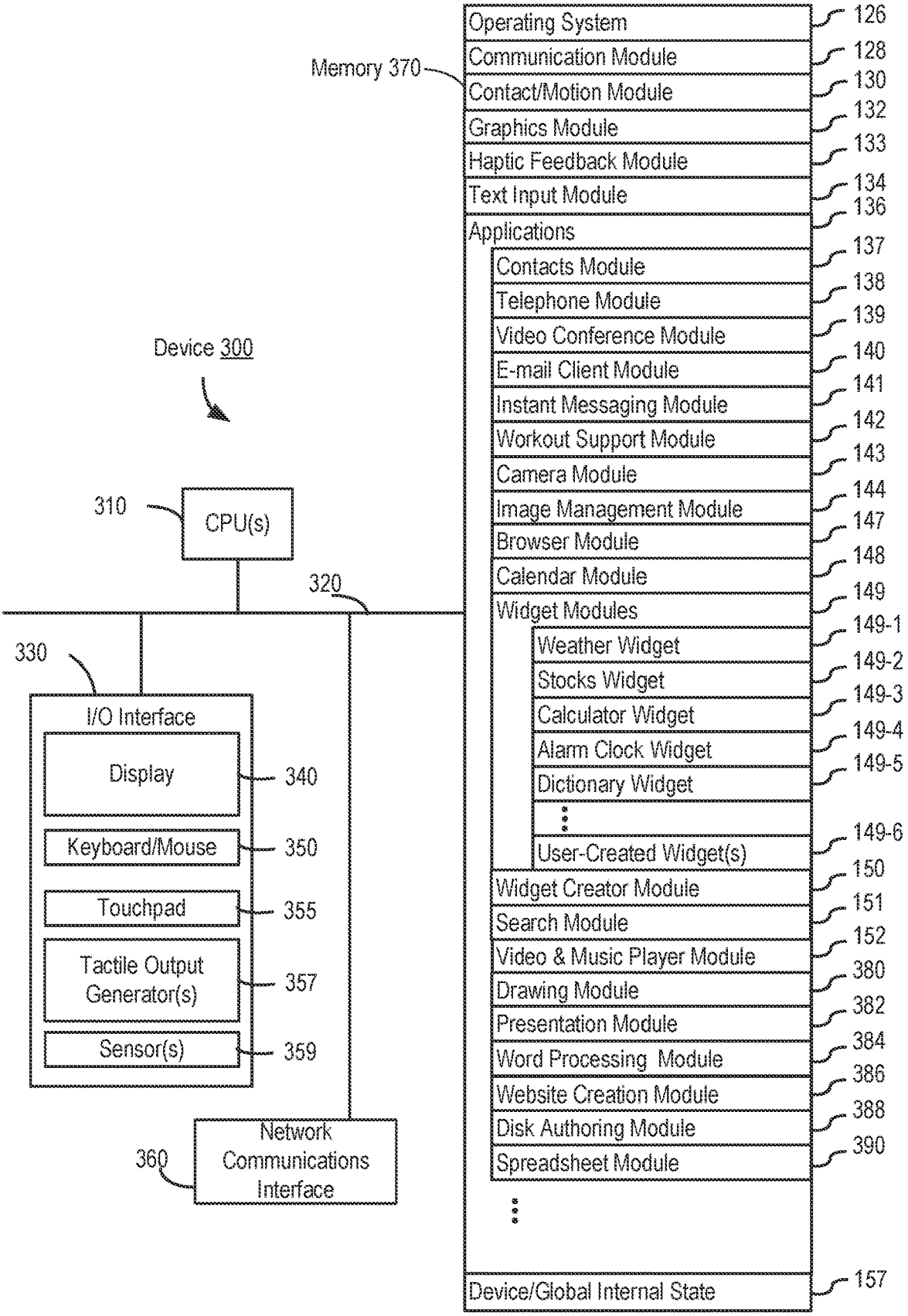
FIG. 2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Camera Module
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Calendar Module
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Widget Modules
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Alarm Clock Widget
149-4
Dictionary Widget
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Video & Music Player Module
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Drawing Module
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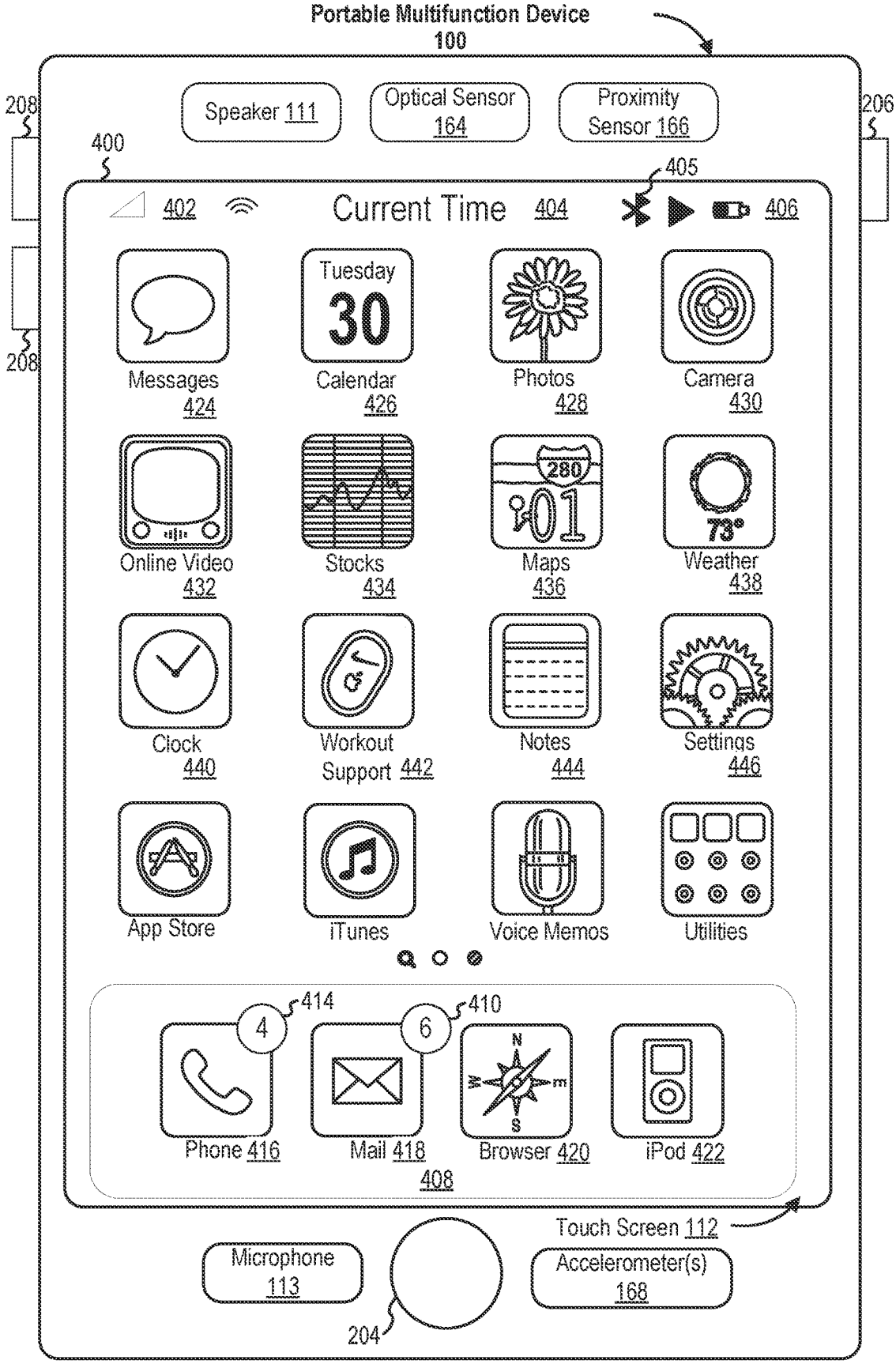
FIG. 3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Notes 444
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Utilities
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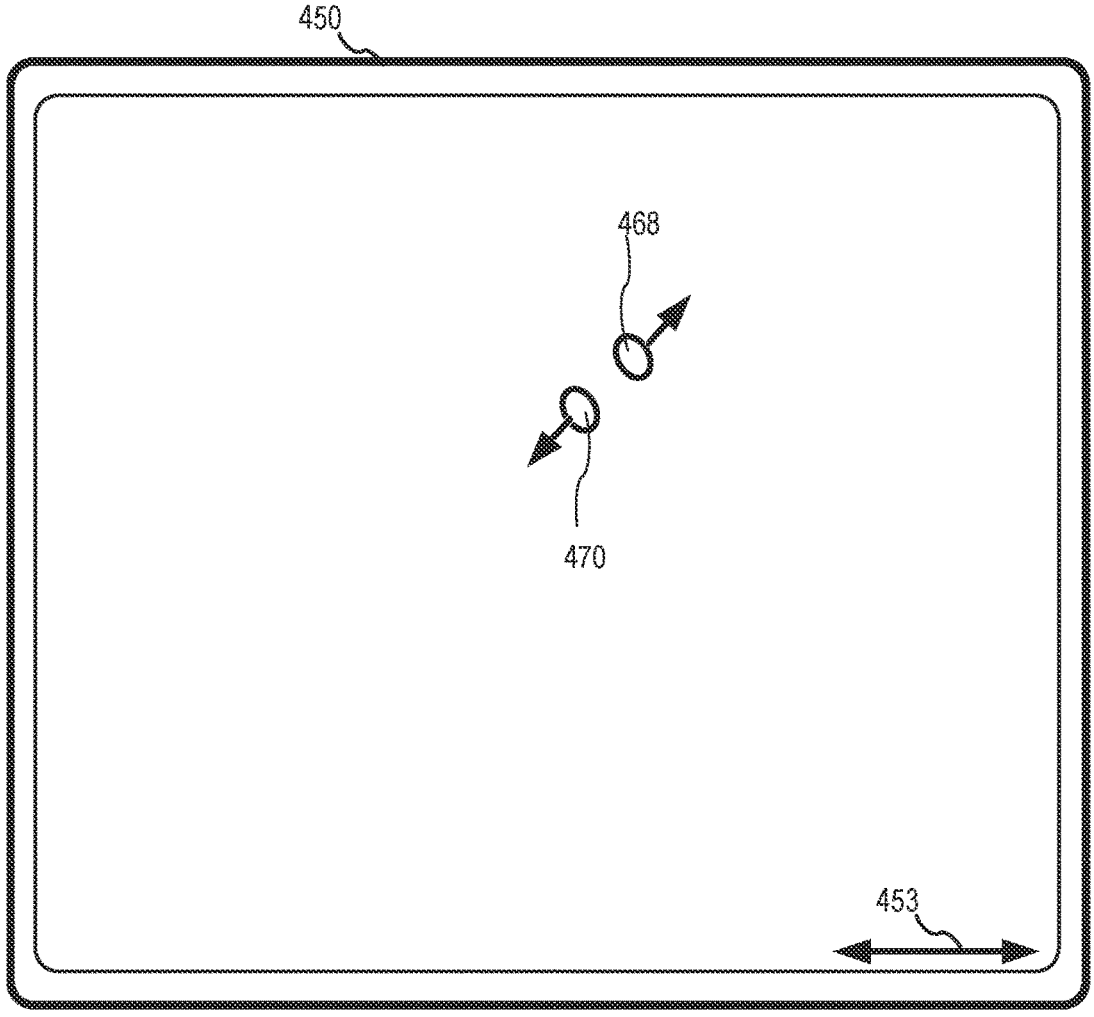
Browser 420
iPod 422
408
Touch Screen 112
Microphone 113
Accelerometer(s) 168
204

FIG. 4A


450
468
470
453

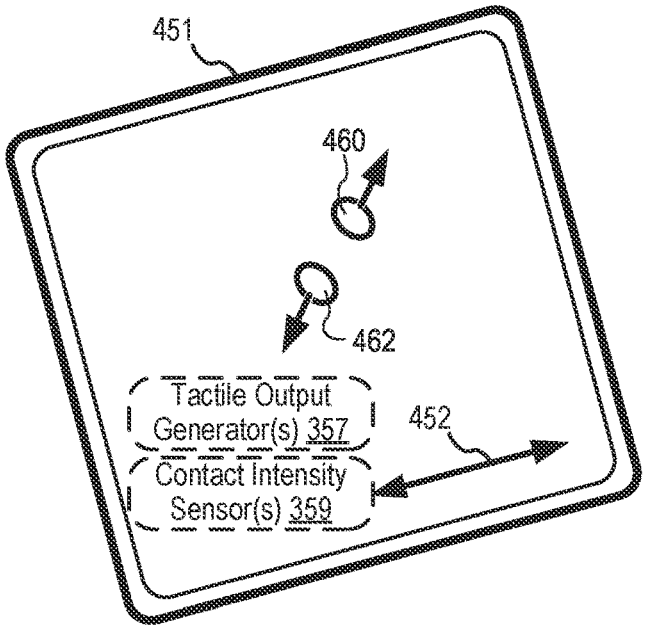

451
460
462
Tactile Output Generator(s) 357
Contact Intensity Sensor(s) 359
452

FIG. 4B

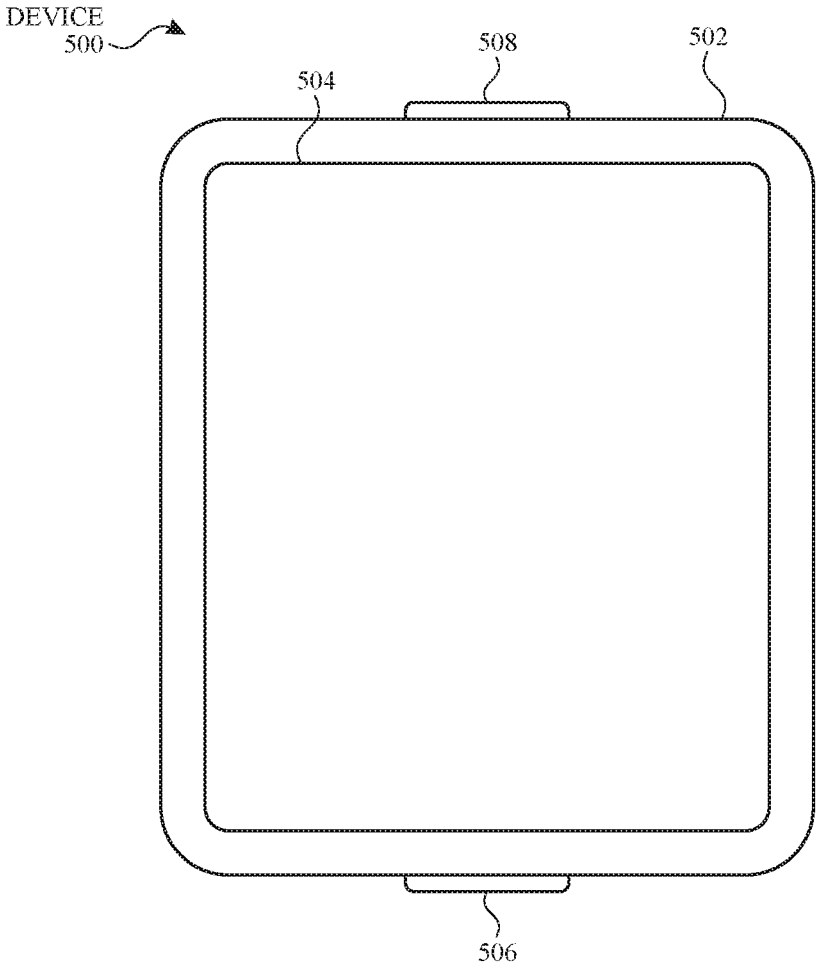


FIG. 5A

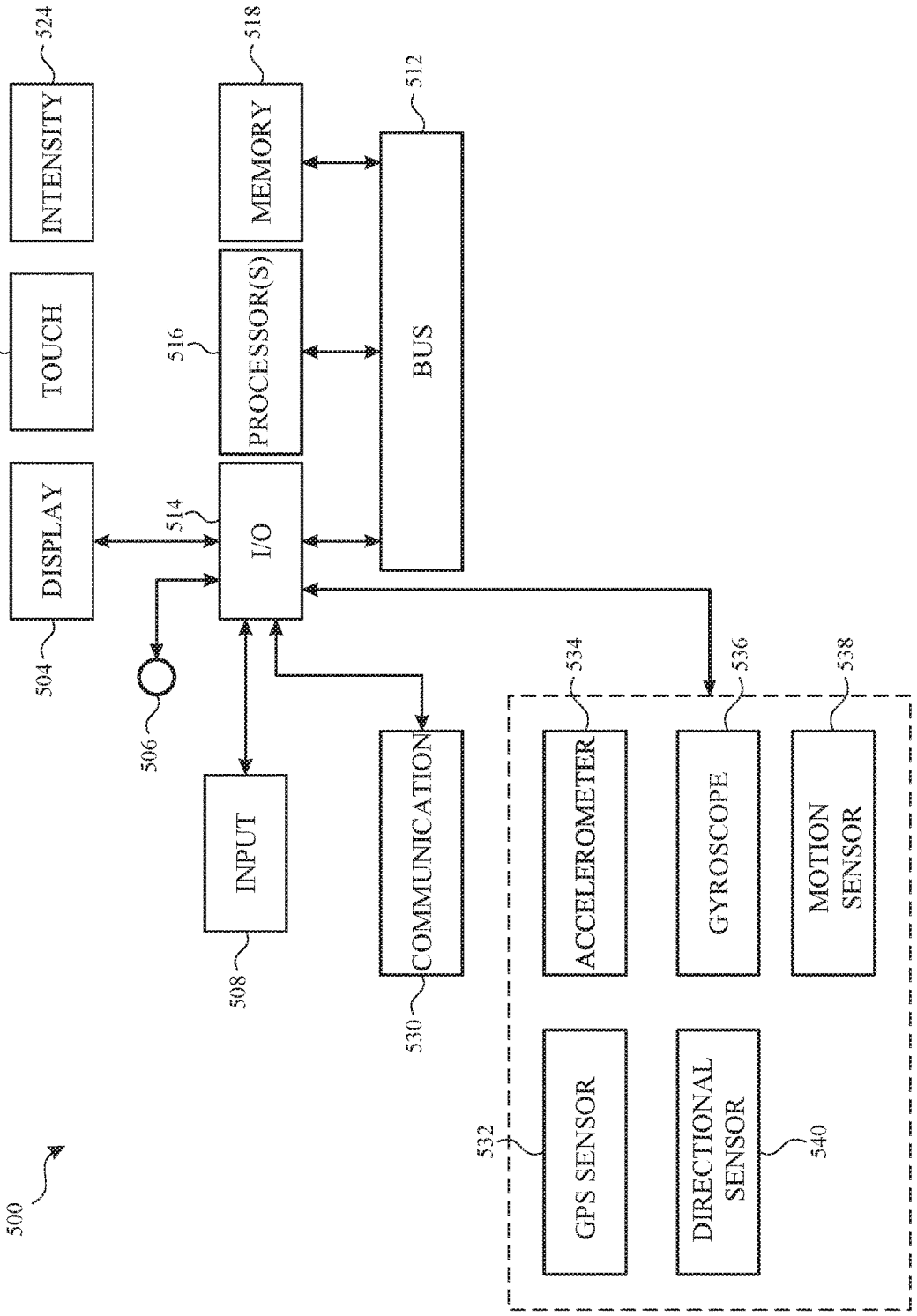

500
504
DISPLAY
522
TOUCH
524
INTENSITY
506
508
INPUT
514
I/O
516
PROCESSOR(S)
518
MEMORY
512
BUS
530
COMMUNICATION
532
GPS SENSOR
534
ACCELEROMETER
536
GYROSCOPE
538
MOTION SENSOR
540
DIRECTIONAL SENSOR

FIG. 5B

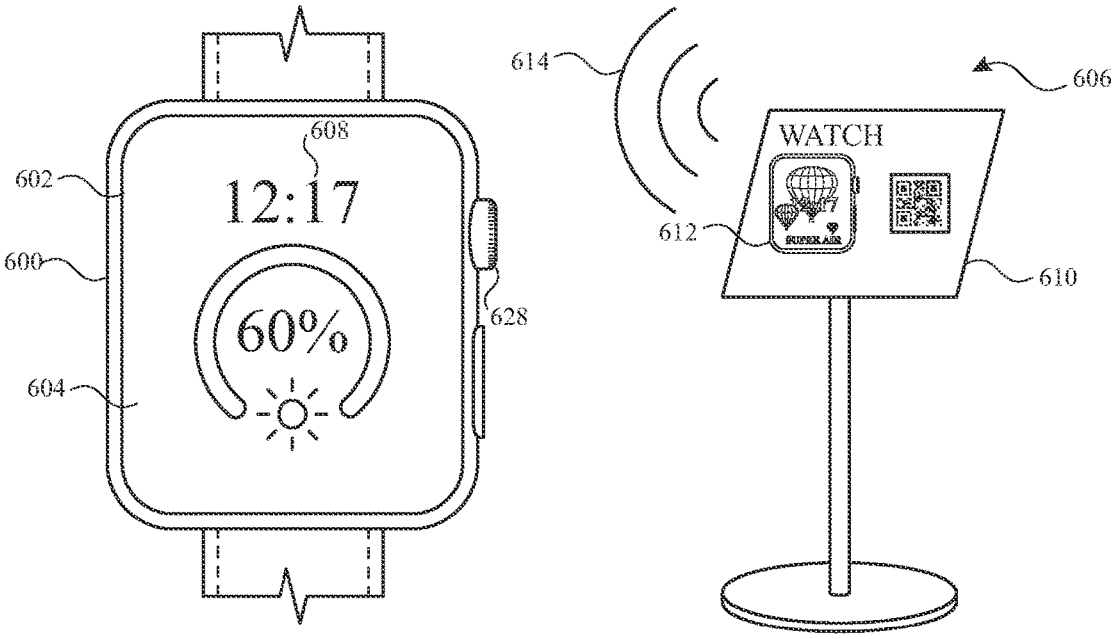


FIG. 6A

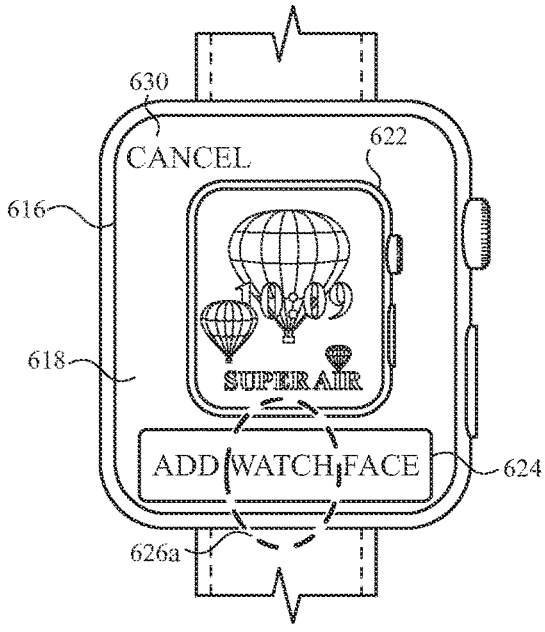


FIG. 6B

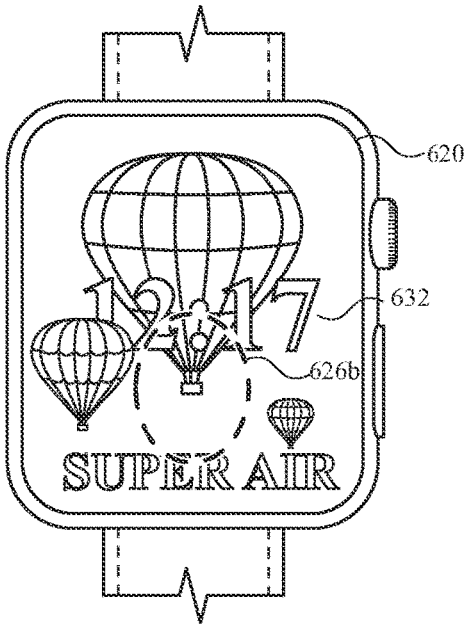


FIG. 6C

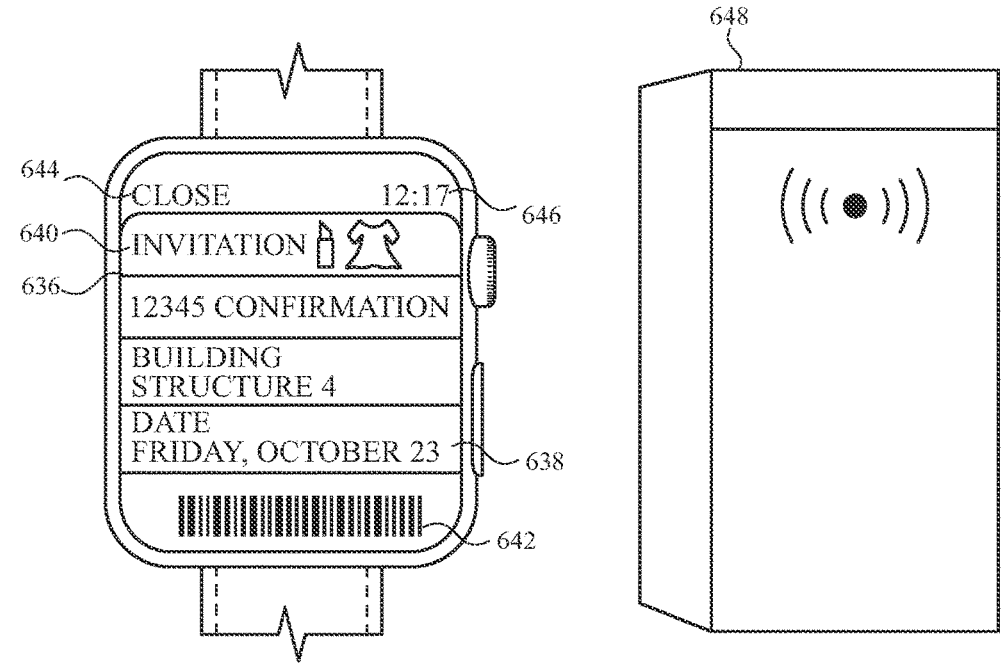


FIG. 6D

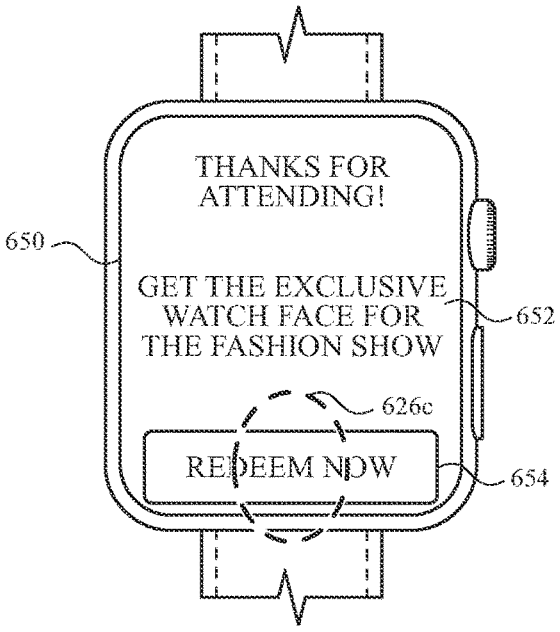


FIG. 6E

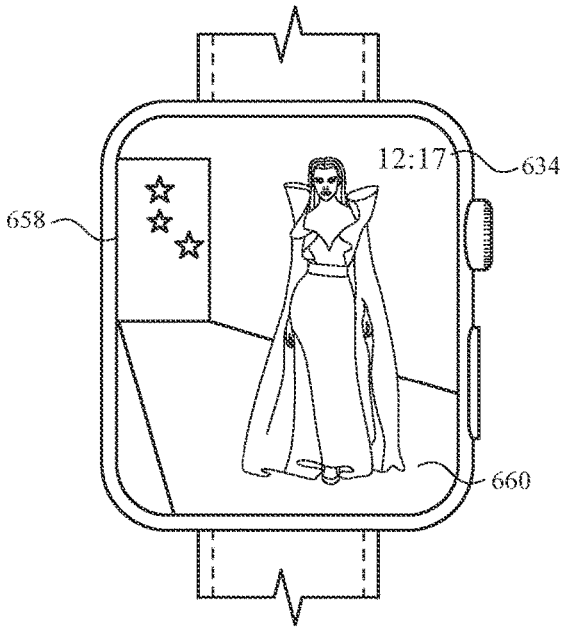


FIG. 6F

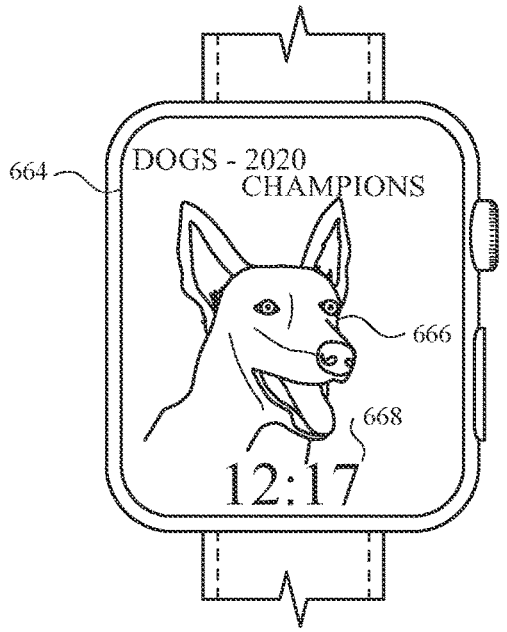


FIG. 6G

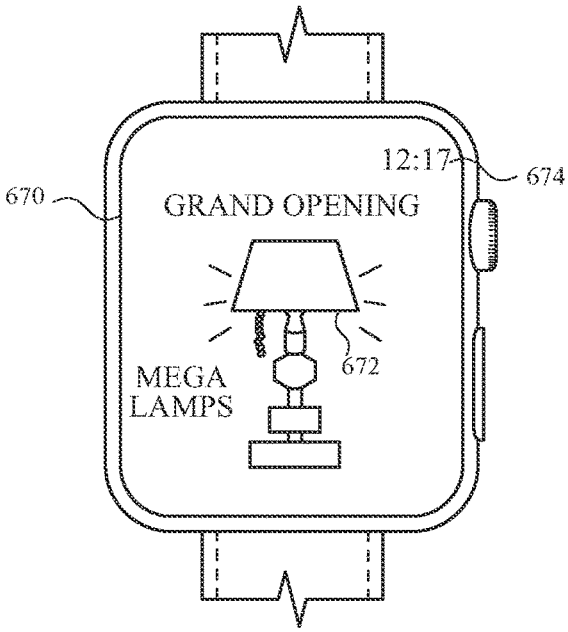


FIG. 6H

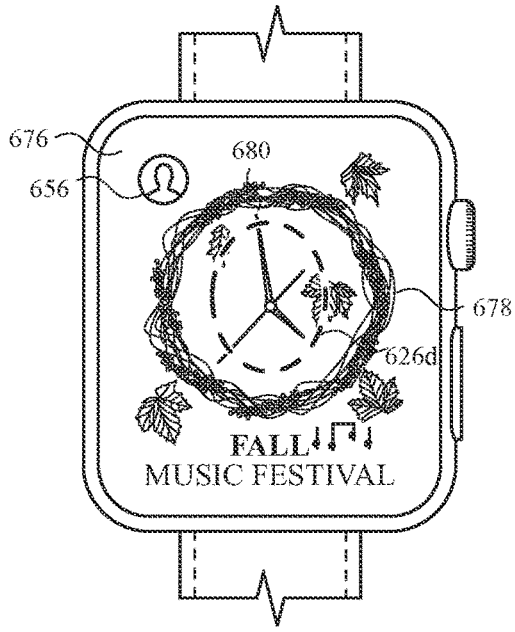


FIG. 6I

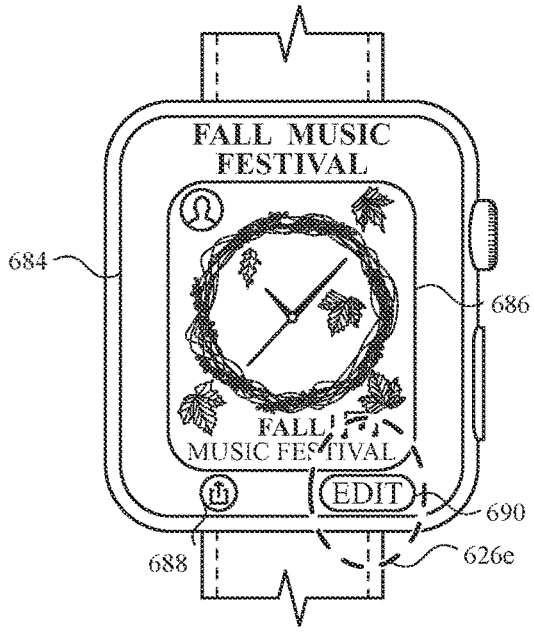


FIG. 6J

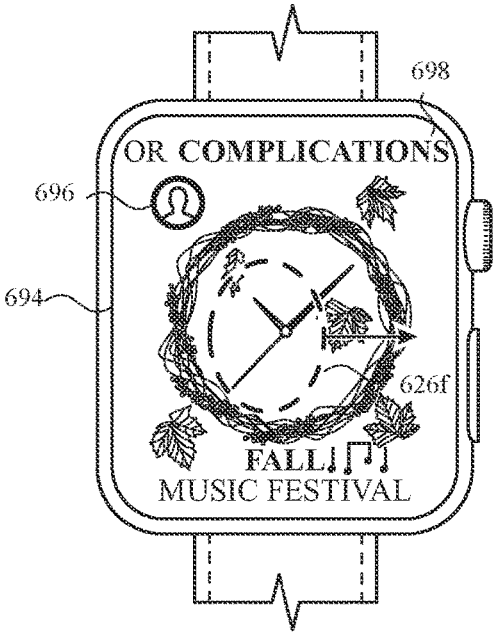


FIG. 6K

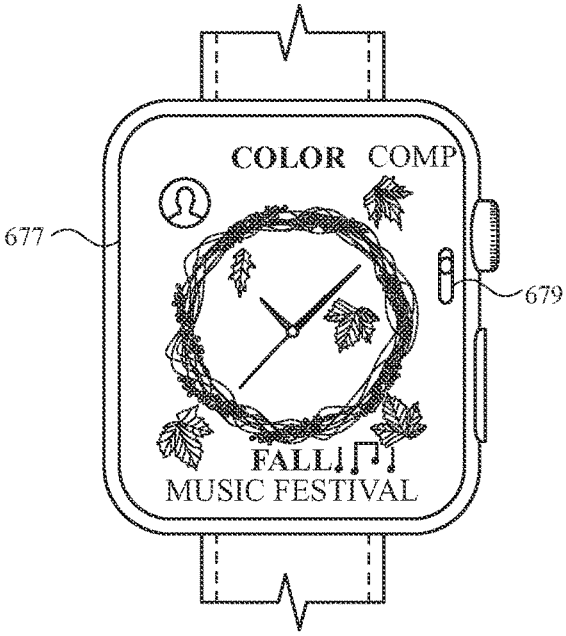


FIG. 6L

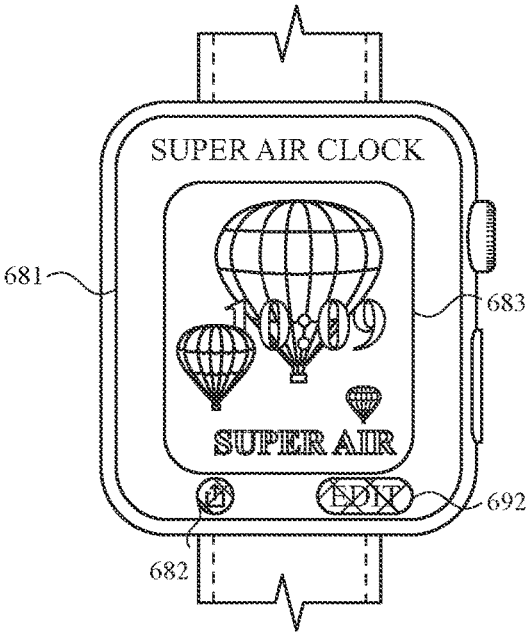


FIG. 6M

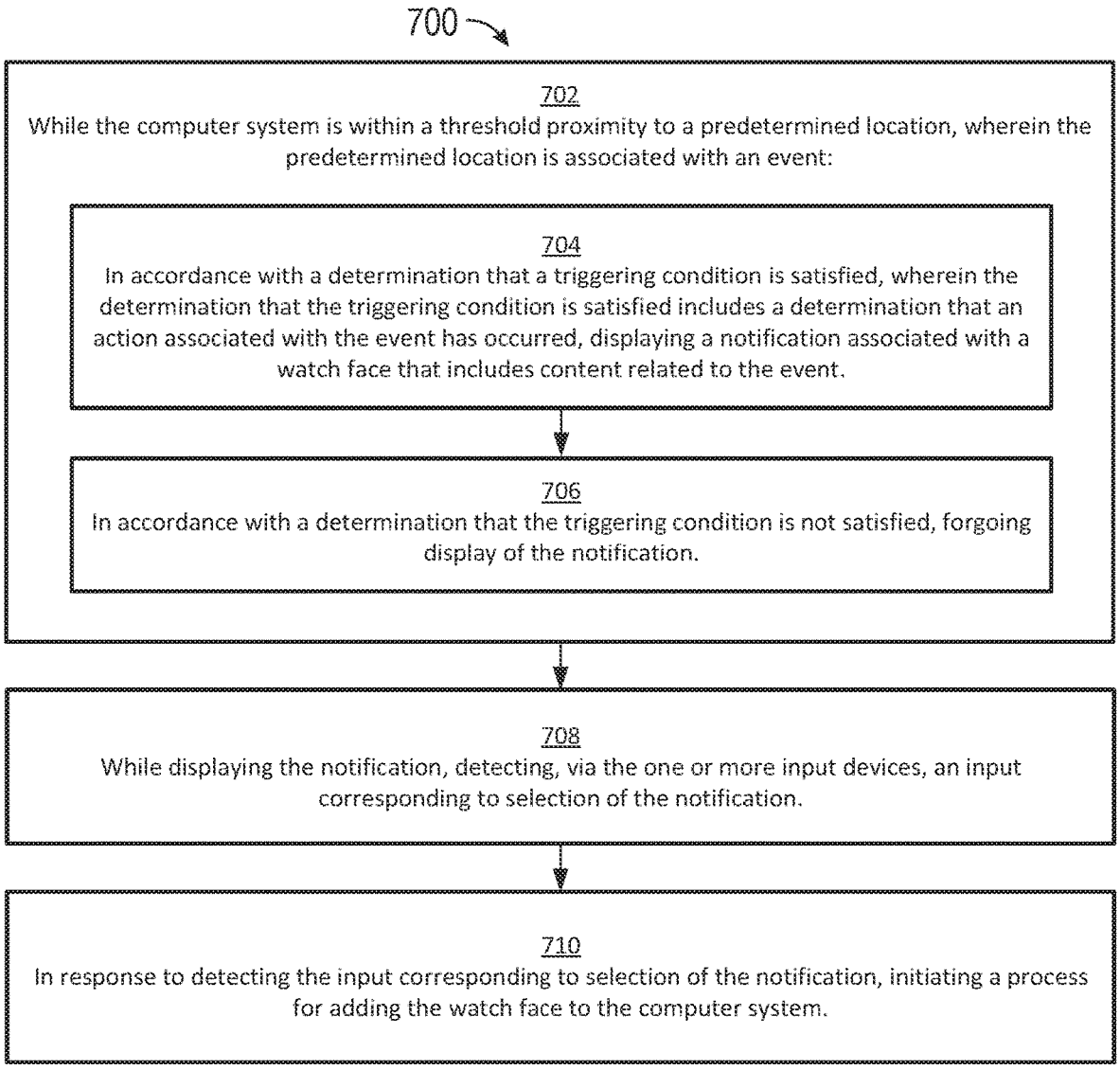

700
702
While the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event:
704
In accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event.
706
In accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification.
708
While displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification.
710
In response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

FIG. 7

TECHNIQUES FOR USER INTERFACES RELATED TO AN EVENT

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority to U.S. Provisional Application No. 63/134,909, filed Jan. 7, 2021, entitled "TECHNIQUES FOR USER INTERFACES RELATED TO AN EVENT," the entire contents of which are hereby incorporated by reference.

FIELD

The present disclosure relates generally to computer user interfaces, and in particular to techniques for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on a computer system.

BACKGROUND

As electronic devices such as smart watches have become more widely used, their functions have grown beyond time and date keeping. Providing an efficient method for using and implementing the various functions on these electronic devices can be complex and time-consuming.

BRIEF SUMMARY

Some techniques for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on a computer system, however, are generally cumbersome and inefficient. For example, some existing techniques use a complex and time-consuming user interface, which may include multiple key presses or keystrokes. Existing techniques require more time than necessary, wasting user time and device energy. This latter consideration is particularly important in battery-operated devices.

Accordingly, the present techniques provide computer systems with faster, more efficient methods and interfaces for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on the computer system. Such methods and interfaces optionally complement or replace other methods for obtaining a user interface that includes content related to an event. Such methods and interfaces reduce the cognitive burden on a user and produce a more efficient human-machine interface. For battery-operated computing devices, such methods and interfaces conserve power and increase the time between battery charges.

In accordance with some embodiments, a method performed at a computer system that is in communication with a display generation component is described. The method comprises: while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event: in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification; while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

In accordance with some embodiments, a non-transitory computer-readable storage medium storing one or more programs configured to be executed by one or more processors of computer system that is in communication with a display generation component is described. The one or more programs include instructions for: while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event: in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification; while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

In accordance with some embodiments, a transitory computer-readable storage medium storing one or more programs configured to be executed by one or more processors of computer system that is in communication with a display generation component is described. The one or more programs include instructions for: while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event: in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification; while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

In accordance with some embodiments, a computer system comprising a display generation component, one or more processors, and memory storing one or more programs configured to be executed by the one or more processors is described. The one or more programs including instructions for: while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event: in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification; while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

Executable instructions for performing these functions are, optionally, included in a non-transitory computer-readable storage medium or other computer program product

configured for execution by one or more processors. Executable instructions for performing these functions are, optionally, included in a transitory computer-readable storage medium or other computer program product configured for execution by one or more processors.

Thus, computer systems are provided with faster, more efficient methods and interfaces for obtaining a user interface that includes content related to an event for display on a computer system, thereby increasing the effectiveness, efficiency, and user satisfaction with such devices. Such methods and interfaces may complement or replace other methods for obtaining a user interface that includes content related to an event.

DESCRIPTION OF THE FIGURES

For a better understanding of the various described embodiments, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

FIG. **1**A is a block diagram illustrating a portable multifunction device with a touch-sensitive display in accordance with some embodiments.

FIG. **1**B is a block diagram illustrating exemplary components for event handling in accordance with some embodiments.

FIG. **2** illustrates a portable multifunction device having a touch screen in accordance with some embodiments.

FIG. **3** is a block diagram of an exemplary multifunction device with a display and a touch-sensitive surface in accordance with some embodiments.

FIG. **4**A illustrates an exemplary user interface for a menu of applications on a portable multifunction device in accordance with some embodiments.

FIG. **4**B illustrates an exemplary user interface for a multifunction device with a touch-sensitive surface that is separate from the display in accordance with some embodiments.

FIG. **5**A illustrates a personal electronic device in accordance with some embodiments.

FIG. **5**B is a block diagram illustrating a personal electronic device in accordance with some embodiments.

FIGS. **6**A-**6**M illustrate techniques for user interfaces with content related to an event in accordance with some embodiments.

FIG. **7** is a flow diagram illustrating methods of obtaining a user interface with content related to an event in accordance with some embodiments.

DESCRIPTION OF EMBODIMENTS

The following description sets forth exemplary methods, parameters, and the like. It should be recognized, however, that such description is not intended as a limitation on the scope of the present disclosure but is instead provided as a description of exemplary embodiments.

There is a need for electronic devices that provide efficient methods and interfaces for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on a computer system. For example, there is a need for user interfaces that enable user interfaces to be quickly and easily obtained. For another example, there is a need for user interfaces that enable convenient downloading of user interfaces corresponding to watch faces that include content related to an event. For another example, there is a need for user interfaces that enable the completion of the addition of a user interface that includes content related to an event where an electronic device is considered to meet certain criteria, such as being located at the event, but not for other electronic devices. Such techniques can reduce the cognitive burden on a user who obtains user interfaces, thereby enhancing productivity. Further, such techniques can reduce processor and battery power otherwise wasted on redundant user inputs.

Below, FIGS. **1**A-**1**B, **2**, **3**, **4**A-**4**B, and **5**A-**5**B provide a description of exemplary devices for performing the techniques for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on a computer system. FIGS. **6**A-**6**M illustrate exemplary user interfaces for obtaining a user interface that includes content related to an event for display on a computer system. FIG. **7** is a flow diagram illustrating methods of obtaining a user interface with content related to an event for display on a computer system in accordance with some embodiments. The user interfaces in FIGS. **6**A-**6**M are used to illustrate the processes described below, including the processes in FIG. **7**.

In addition, in methods described herein where one or more steps are contingent upon one or more conditions having been met, it should be understood that the described method can be repeated in multiple repetitions so that over the course of the repetitions all of the conditions upon which steps in the method are contingent have been met in different repetitions of the method. For example, if a method requires performing a first step if a condition is satisfied, and a second step if the condition is not satisfied, then a person of ordinary skill would appreciate that the claimed steps are repeated until the condition has been both satisfied and not satisfied, in no particular order. Thus, a method described with one or more steps that are contingent upon one or more conditions having been met could be rewritten as a method that is repeated until each of the conditions described in the method has been met. This, however, is not required of system or computer readable medium claims where the system or computer readable medium contains instructions for performing the contingent operations based on the satisfaction of the corresponding one or more conditions and thus is capable of determining whether the contingency has or has not been satisfied without explicitly repeating steps of a method until all of the conditions upon which steps in the method are contingent have been met. A person having ordinary skill in the art would also understand that, similar to a method with contingent steps, a system or computer readable storage medium can repeat the steps of a method as many times as are needed to ensure that all of the contingent steps have been performed.

Although the following description uses terms "first," "second," etc. to describe various elements, these elements should not be limited by the terms. In some embodiments, these terms are used to distinguish one element from another. For example, a first touch could be termed a second touch, and, similarly, a second touch could be termed a first touch, without departing from the scope of the various described embodiments. In some embodiments, the first touch and the second touch are two separate references to the same touch. In some embodiments, the first touch and the second touch are both touches, but they are not the same touch.

The terminology used in the description of the various described embodiments herein is for the purpose of describing particular embodiments only and is not intended to be limiting. As used in the description of the various described embodiments and the appended claims, the singular forms

"a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term "and/or" as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms "includes," "including," "comprises," and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

The term "if" is, optionally, construed to mean "when" or "upon" or "in response to determining" or "in response to detecting," depending on the context. Similarly, the phrase "if it is determined" or "if [a stated condition or event] is detected" is, optionally, construed to mean "upon determining" or "in response to determining" or "upon detecting [the stated condition or event]" or "in response to detecting [the stated condition or event]," depending on the context.

Embodiments of electronic devices, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the device is a portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions. Exemplary embodiments of portable multifunction devices include, without limitation, the iPhone®, iPod Touch®, and iPad® devices from Apple Inc. of Cupertino, Calif. Other portable electronic devices, such as laptops or tablet computers with touch-sensitive surfaces (e.g., touch screen displays and/or touchpads), are, optionally, used. It should also be understood that, in some embodiments, the device is not a portable communications device, but is a desktop computer with a touch-sensitive surface (e.g., a touch screen display and/or a touchpad). In some embodiments, the electronic device is a computer system that is in communication (e.g., via wireless communication, via wired communication) with a display generation component. The display generation component is configured to provide visual output, such as display via a CRT display, display via an LED display, or display via image projection. In some embodiments, the display generation component is integrated with the computer system. In some embodiments, the display generation component is separate from the computer system. As used herein, "displaying" content includes causing to display the content (e.g., video data rendered or decoded by display controller **156**) by transmitting, via a wired or wireless connection, data (e.g., image data or video data) to an integrated or external display generation component to visually produce the content.

In the discussion that follows, an electronic device that includes a display and a touch-sensitive surface is described. It should be understood, however, that the electronic device optionally includes one or more other physical user-interface devices, such as a physical keyboard, a mouse, and/or a joystick.

The device typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application.

The various applications that are executed on the device optionally use at least one common physical user-interface device, such as the touch-sensitive surface. One or more functions of the touch-sensitive surface as well as corresponding information displayed on the device are, optionally, adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch-sensitive surface) of the device optionally supports the variety of applications with user interfaces that are intuitive and transparent to the user.

Attention is now directed toward embodiments of portable devices with touch-sensitive displays. FIG. **1A** is a block diagram illustrating portable multifunction device **100** with touch-sensitive display system **112** in accordance with some embodiments. Touch-sensitive display **112** is sometimes called a "touch screen" for convenience and is sometimes known as or called a "touch-sensitive display system." Device **100** includes memory **102** (which optionally includes one or more computer-readable storage mediums), memory controller **122**, one or more processing units (CPUs) **120**, peripherals interface **118**, RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, input/output (I/O) subsystem **106**, other input control devices **116**, and external port **124**. Device **100** optionally includes one or more optical sensors **164**. Device **100** optionally includes one or more contact intensity sensors **165** for detecting intensity of contacts on device **100** (e.g., a touch-sensitive surface such as touch-sensitive display system **112** of device **100**). Device **100** optionally includes one or more tactile output generators **167** for generating tactile outputs on device **100** (e.g., generating tactile outputs on a touch-sensitive surface such as touch-sensitive display system **112** of device **100** or touchpad **355** of device **300**). These components optionally communicate over one or more communication buses or signal lines **103**.

As used in the specification and claims, the term "intensity" of a contact on a touch-sensitive surface refers to the force or pressure (force per unit area) of a contact (e.g., a finger contact) on the touch-sensitive surface, or to a substitute (proxy) for the force or pressure of a contact on the touch-sensitive surface. The intensity of a contact has a range of values that includes at least four distinct values and more typically includes hundreds of distinct values (e.g., at least 256). Intensity of a contact is, optionally, determined (or measured) using various approaches and various sensors or combinations of sensors. For example, one or more force sensors underneath or adjacent to the touch-sensitive surface are, optionally, used to measure force at various points on the touch-sensitive surface. In some implementations, force measurements from multiple force sensors are combined (e.g., a weighted average) to determine an estimated force of a contact. Similarly, a pressure-sensitive tip of a stylus is, optionally, used to determine a pressure of the stylus on the touch-sensitive surface. Alternatively, the size of the contact area detected on the touch-sensitive surface and/or changes thereto, the capacitance of the touch-sensitive surface proximate to the contact and/or changes thereto, and/or the resistance of the touch-sensitive surface proximate to the contact and/or changes thereto are, optionally, used as a substitute for the force or pressure of the contact on the touch-sensitive surface. In some implementations, the substitute measurements for contact force or pressure are used directly to determine whether an intensity threshold has been exceeded (e.g., the intensity threshold is described in units corresponding to the substitute measurements). In some implementations, the substitute measurements for contact

force or pressure are converted to an estimated force or pressure, and the estimated force or pressure is used to determine whether an intensity threshold has been exceeded (e.g., the intensity threshold is a pressure threshold measured in units of pressure). Using the intensity of a contact as an attribute of a user input allows for user access to additional device functionality that may otherwise not be accessible by the user on a reduced-size device with limited real estate for displaying affordances (e.g., on a touch-sensitive display) and/or receiving user input (e.g., via a touch-sensitive display, a touch-sensitive surface, or a physical/mechanical control such as a knob or a button).

As used in the specification and claims, the term "tactile output" refers to physical displacement of a device relative to a previous position of the device, physical displacement of a component (e.g., a touch-sensitive surface) of a device relative to another component (e.g., housing) of the device, or displacement of the component relative to a center of mass of the device that will be detected by a user with the user's sense of touch. For example, in situations where the device or the component of the device is in contact with a surface of a user that is sensitive to touch (e.g., a finger, palm, or other part of a user's hand), the tactile output generated by the physical displacement will be interpreted by the user as a tactile sensation corresponding to a perceived change in physical characteristics of the device or the component of the device. For example, movement of a touch-sensitive surface (e.g., a touch-sensitive display or trackpad) is, optionally, interpreted by the user as a "down click" or "up click" of a physical actuator button. In some cases, a user will feel a tactile sensation such as an "down click" or "up click" even when there is no movement of a physical actuator button associated with the touch-sensitive surface that is physically pressed (e.g., displaced) by the user's movements. As another example, movement of the touch-sensitive surface is, optionally, interpreted or sensed by the user as "roughness" of the touch-sensitive surface, even when there is no change in smoothness of the touch-sensitive surface. While such interpretations of touch by a user will be subject to the individualized sensory perceptions of the user, there are many sensory perceptions of touch that are common to a large majority of users. Thus, when a tactile output is described as corresponding to a particular sensory perception of a user (e.g., an "up click," a "down click," "roughness"), unless otherwise stated, the generated tactile output corresponds to physical displacement of the device or a component thereof that will generate the described sensory perception for a typical (or average) user.

It should be appreciated that device **100** is only one example of a portable multifunction device, and that device **100** optionally has more or fewer components than shown, optionally combines two or more components, or optionally has a different configuration or arrangement of the components. The various components shown in FIG. **1**A are implemented in hardware, software, or a combination of both hardware and software, including one or more signal processing and/or application-specific integrated circuits.

Memory **102** optionally includes high-speed random access memory and optionally also includes non-volatile memory, such as one or more magnetic disk storage devices, flash memory devices, or other non-volatile solid-state memory devices. Memory controller **122** optionally controls access to memory **102** by other components of device **100**.

Peripherals interface **118** can be used to couple input and output peripherals of the device to CPU **120** and memory **102**. The one or more processors **120** run or execute various software programs (such as computer programs (e.g., including instructions)) and/or sets of instructions stored in memory **102** to perform various functions for device **100** and to process data. In some embodiments, peripherals interface **118**, CPU **120**, and memory controller **122** are, optionally, implemented on a single chip, such as chip **104**. In some other embodiments, they are, optionally, implemented on separate chips.

RF (radio frequency) circuitry **108** receives and sends RF signals, also called electromagnetic signals. RF circuitry **108** converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. RF circuitry **108** optionally includes well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a subscriber identity module (SIM) card, memory, and so forth. RF circuitry **108** optionally communicates with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication. The RF circuitry **108** optionally includes well-known circuitry for detecting near field communication (NFC) fields, such as by a short-range communication radio. The wireless communication optionally uses any of a plurality of communications standards, protocols, and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), Evolution, Data-Only (EV-DO), HSPA, HSPA+, Dual-Cell HSPA (DC-HSPDA), long term evolution (LTE), near field communication (NFC), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Bluetooth Low Energy (BTLE), Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, and/or IEEE 802.11ac), voice over Internet Protocol (VoIP), Wi-MAX, a protocol for e-mail (e.g., Internet message access protocol (IMAP) and/or post office protocol (POP)), instant messaging (e.g., extensible messaging and presence protocol (XMPP), Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE), Instant Messaging and Presence Service (IMPS)), and/or Short Message Service (SMS), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document.

Audio circuitry **110**, speaker **111**, and microphone **113** provide an audio interface between a user and device **100**. Audio circuitry **110** receives audio data from peripherals interface **118**, converts the audio data to an electrical signal, and transmits the electrical signal to speaker **111**. Speaker **111** converts the electrical signal to human-audible sound waves. Audio circuitry **110** also receives electrical signals converted by microphone **113** from sound waves. Audio circuitry **110** converts the electrical signal to audio data and transmits the audio data to peripherals interface **118** for processing. Audio data is, optionally, retrieved from and/or transmitted to memory **102** and/or RF circuitry **108** by peripherals interface **118**. In some embodiments, audio circuitry **110** also includes a headset jack (e.g., **212**, FIG. **2**). The headset jack provides an interface between audio circuitry **110** and removable audio input/output peripherals,

such as output-only headphones or a headset with both output (e.g., a headphone for one or both ears) and input (e.g., a microphone).

I/O subsystem **106** couples input/output peripherals on device **100**, such as touch screen **112** and other input control devices **116**, to peripherals interface **118**. I/O subsystem **106** optionally includes display controller **156**, optical sensor controller **158**, depth camera controller **169**, intensity sensor controller **159**, haptic feedback controller **161**, and one or more input controllers **160** for other input or control devices. The one or more input controllers **160** receive/send electrical signals from/to other input control devices **116**. The other input control devices **116** optionally include physical buttons (e.g., push buttons, rocker buttons, etc.), dials, slider switches, joysticks, click wheels, and so forth. In some embodiments, input controller(s) **160** are, optionally, coupled to any (or none) of the following: a keyboard, an infrared port, a USB port, and a pointer device such as a mouse. The one or more buttons (e.g., **208**, FIG. **2**) optionally include an up/down button for volume control of speaker **111** and/or microphone **113**. The one or more buttons optionally include a push button (e.g., **206**, FIG. **2**). In some embodiments, the electronic device is a computer system that is in communication (e.g., via wireless communication, via wired communication) with one or more input devices. In some embodiments, the one or more input devices include a touch-sensitive surface (e.g., a trackpad, as part of a touch-sensitive display). In some embodiments, the one or more input devices include one or more camera sensors (e.g., one or more optical sensors **164** and/or one or more depth camera sensors **175**), such as for tracking a user's gestures (e.g., hand gestures and/or air gestures) as input. In some embodiments, the one or more input devices are integrated with the computer system. In some embodiments, the one or more input devices are separate from the computer system. In some embodiments, an air gesture is a gesture that is detected without the user touching an input element that is part of the device (or independently of an input element that is a part of the device) and is based on detected motion of a portion of the user's body through the air including motion of the user's body relative to an absolute reference (e.g., an angle of the user's arm relative to the ground or a distance of the user's hand relative to the ground), relative to another portion of the user's body (e.g., movement of a hand of the user relative to a shoulder of the user, movement of one hand of the user relative to another hand of the user, and/or movement of a finger of the user relative to another finger or portion of a hand of the user), and/or absolute motion of a portion of the user's body (e.g., a tap gesture that includes movement of a hand in a predetermined pose by a predetermined amount and/or speed, or a shake gesture that includes a predetermined speed or amount of rotation of a portion of the user's body).) as input. In some embodiments, the one or more input devices are integrated with the computer system. In some embodiments, the one or more input devices are separate from the computer system.

A quick press of the push button optionally disengages a lock of touch screen **112** or optionally begins a process that uses gestures on the touch screen to unlock the device, as described in U.S. patent application Ser. No. 11/322,549, "Unlocking a Device by Performing Gestures on an Unlock Image," filed Dec. 23, 2005, U.S. Pat. No. 7,657,849, which is hereby incorporated by reference in its entirety. A longer press of the push button (e.g., **206**) optionally turns power to device **100** on or off. The functionality of one or more of the buttons are, optionally, user-customizable. Touch screen **112** is used to implement virtual or soft buttons and one or more soft keyboards.

Touch-sensitive display **112** provides an input interface and an output interface between the device and a user. Display controller **156** receives and/or sends electrical signals from/to touch screen **112**. Touch screen **112** displays visual output to the user. The visual output optionally includes graphics, text, icons, video, and any combination thereof (collectively termed "graphics"). In some embodiments, some or all of the visual output optionally corresponds to user-interface objects.

Touch screen **112** has a touch-sensitive surface, sensor, or set of sensors that accepts input from the user based on haptic and/or tactile contact. Touch screen **112** and display controller **156** (along with any associated modules and/or sets of instructions in memory **102**) detect contact (and any movement or breaking of the contact) on touch screen **112** and convert the detected contact into interaction with user-interface objects (e.g., one or more soft keys, icons, web pages, or images) that are displayed on touch screen **112**. In an exemplary embodiment, a point of contact between touch screen **112** and the user corresponds to a finger of the user.

Touch screen **112** optionally uses LCD (liquid crystal display) technology, LPD (light emitting polymer display) technology, or LED (light emitting diode) technology, although other display technologies are used in other embodiments. Touch screen **112** and display controller **156** optionally detect contact and any movement or breaking thereof using any of a plurality of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with touch screen **112**. In an exemplary embodiment, projected mutual capacitance sensing technology is used, such as that found in the iPhone® and iPod Touch® from Apple Inc. of Cupertino, Calif.

A touch-sensitive display in some embodiments of touch screen **112** is, optionally, analogous to the multi-touch sensitive touchpads described in the following U.S. Pat. No. 6,323,846 (Westerman et al.), U.S. Pat. No. 6,570,557 (Westerman et al.), and/or U.S. Pat. No. 6,677,932 (Westerman), and/or U.S. Patent Publication 2002/0015024A1, each of which is hereby incorporated by reference in its entirety. However, touch screen **112** displays visual output from device **100**, whereas touch-sensitive touchpads do not provide visual output.

A touch-sensitive display in some embodiments of touch screen **112** is described in the following applications: (1) U.S. patent application Ser. No. 11/381,313, "Multipoint Touch Surface Controller," filed May 2, 2006; (2) U.S. patent application Ser. No. 10/840,862, "Multipoint Touchscreen," filed May 6, 2004; (3) U.S. patent application Ser. No. 10/903,964, "Gestures For Touch Sensitive Input Devices," filed Jul. 30, 2004; (4) U.S. patent application Ser. No. 11/048,264, "Gestures For Touch Sensitive Input Devices," filed Jan. 31, 2005; (5) U.S. patent application Ser. No. 11/038,590, "Mode-Based Graphical User Interfaces For Touch Sensitive Input Devices," filed Jan. 18, 2005; (6) U.S. patent application Ser. No. 11/228,758, "Virtual Input Device Placement On A Touch Screen User Interface," filed Sep. 16, 2005; (7) U.S. patent application Ser. No. 11/228,700, "Operation Of A Computer With A Touch Screen Interface," filed Sep. 16, 2005; (8) U.S. patent application Ser. No. 11/228,737, "Activating Virtual Keys Of A Touch-Screen Virtual Keyboard," filed Sep. 16, 2005; and (9) U.S.

patent application Ser. No. 11/367,749, "Multi-Functional Hand-Held Device," filed Mar. 3, 2006. All of these applications are incorporated by reference herein in their entirety.

Touch screen **112** optionally has a video resolution in excess of 100 dpi. In some embodiments, the touch screen has a video resolution of approximately 160 dpi. The user optionally makes contact with touch screen **112** using any suitable object or appendage, such as a stylus, a finger, and so forth. In some embodiments, the user interface is designed to work primarily with finger-based contacts and gestures, which can be less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.

In some embodiments, in addition to the touch screen, device **100** optionally includes a touchpad for activating or deactivating particular functions. In some embodiments, the touchpad is a touch-sensitive area of the device that, unlike the touch screen, does not display visual output. The touchpad is, optionally, a touch-sensitive surface that is separate from touch screen **112** or an extension of the touch-sensitive surface formed by the touch screen.

Device **100** also includes power system **162** for powering the various components. Power system **162** optionally includes a power management system, one or more power sources (e.g., battery, alternating current (AC)), a recharging system, a power failure detection circuit, a power converter or inverter, a power status indicator (e.g., a light-emitting diode (LED)) and any other components associated with the generation, management and distribution of power in portable devices.

Device **100** optionally also includes one or more optical sensors **164**. FIG. **1**A shows an optical sensor coupled to optical sensor controller **158** in I/O subsystem **106**. Optical sensor **164** optionally includes charge-coupled device (CCD) or complementary metal-oxide semiconductor (CMOS) phototransistors. Optical sensor **164** receives light from the environment, projected through one or more lenses, and converts the light to data representing an image. In conjunction with imaging module **143** (also called a camera module), optical sensor **164** optionally captures still images or video. In some embodiments, an optical sensor is located on the back of device **100**, opposite touch screen display **112** on the front of the device so that the touch screen display is enabled for use as a viewfinder for still and/or video image acquisition. In some embodiments, an optical sensor is located on the front of the device so that the user's image is, optionally, obtained for video conferencing while the user views the other video conference participants on the touch screen display. In some embodiments, the position of optical sensor **164** can be changed by the user (e.g., by rotating the lens and the sensor in the device housing) so that a single optical sensor **164** is used along with the touch screen display for both video conferencing and still and/or video image acquisition.

Device **100** optionally also includes one or more depth camera sensors **175**. FIG. **1**A shows a depth camera sensor coupled to depth camera controller **169** in I/O subsystem **106**. Depth camera sensor **175** receives data from the environment to create a three dimensional model of an object (e.g., a face) within a scene from a viewpoint (e.g., a depth camera sensor). In some embodiments, in conjunction with imaging module **143** (also called a camera module), depth camera sensor **175** is optionally used to determine a depth map of different portions of an image captured by the imaging module **143**. In some embodiments, a depth camera sensor is located on the front of device **100** so that the user's image with depth information is, optionally, obtained for video conferencing while the user views the other video conference participants on the touch screen display and to capture selfies with depth map data. In some embodiments, the depth camera sensor **175** is located on the back of device, or on the back and the front of the device **100**. In some embodiments, the position of depth camera sensor **175** can be changed by the user (e.g., by rotating the lens and the sensor in the device housing) so that a depth camera sensor **175** is used along with the touch screen display for both video conferencing and still and/or video image acquisition.

Device **100** optionally also includes one or more contact intensity sensors **165**. FIG. **1**A shows a contact intensity sensor coupled to intensity sensor controller **159** in I/O subsystem **106**. Contact intensity sensor **165** optionally includes one or more piezoresistive strain gauges, capacitive force sensors, electric force sensors, piezoelectric force sensors, optical force sensors, capacitive touch-sensitive surfaces, or other intensity sensors (e.g., sensors used to measure the force (or pressure) of a contact on a touch-sensitive surface). Contact intensity sensor **165** receives contact intensity information (e.g., pressure information or a proxy for pressure information) from the environment. In some embodiments, at least one contact intensity sensor is collocated with, or proximate to, a touch-sensitive surface (e.g., touch-sensitive display system **112**). In some embodiments, at least one contact intensity sensor is located on the back of device **100**, opposite touch screen display **112**, which is located on the front of device **100**.

Device **100** optionally also includes one or more proximity sensors **166**. FIG. **1**A shows proximity sensor **166** coupled to peripherals interface **118**. Alternately, proximity sensor **166** is, optionally, coupled to input controller **160** in I/O subsystem **106**. Proximity sensor **166** optionally performs as described in U.S. patent application Ser. No. 11/241,839, "Proximity Detector In Handheld Device"; Ser. No. 11/240,788, "Proximity Detector In Handheld Device"; Ser. No. 11/620,702, "Using Ambient Light Sensor To Augment Proximity Sensor Output"; Ser. No. 11/586,862, "Automated Response To And Sensing Of User Activity In Portable Devices"; and Ser. No. 11/638,251, "Methods And Systems For Automatic Configuration Of Peripherals," which are hereby incorporated by reference in their entirety. In some embodiments, the proximity sensor turns off and disables touch screen **112** when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call).

Device **100** optionally also includes one or more tactile output generators **167**. FIG. **1**A shows a tactile output generator coupled to haptic feedback controller **161** in I/O subsystem **106**. Tactile output generator **167** optionally includes one or more electroacoustic devices such as speakers or other audio components and/or electromechanical devices that convert energy into linear motion such as a motor, solenoid, electroactive polymer, piezoelectric actuator, electrostatic actuator, or other tactile output generating component (e.g., a component that converts electrical signals into tactile outputs on the device). Contact intensity sensor **165** receives tactile feedback generation instructions from haptic feedback module **133** and generates tactile outputs on device **100** that are capable of being sensed by a user of device **100**. In some embodiments, at least one tactile output generator is collocated with, or proximate to, a touch-sensitive surface (e.g., touch-sensitive display system **112**) and, optionally, generates a tactile output by moving

the touch-sensitive surface vertically (e.g., in/out of a surface of device **100**) or laterally (e.g., back and forth in the same plane as a surface of device **100**). In some embodiments, at least one tactile output generator sensor is located on the back of device **100**, opposite touch screen display **112**, which is located on the front of device **100**.

Device **100** optionally also includes one or more accelerometers **168**. FIG. **1**A shows accelerometer **168** coupled to peripherals interface **118**. Alternately, accelerometer **168** is, optionally, coupled to an input controller **160** in I/O subsystem **106**. Accelerometer **168** optionally performs as described in U.S. Patent Publication No. 20050190059, "Acceleration-based Theft Detection System for Portable Electronic Devices," and U.S. Patent Publication No. 20060017692, "Methods And Apparatuses For Operating A Portable Device Based On An Accelerometer," both of which are incorporated by reference herein in their entirety. In some embodiments, information is displayed on the touch screen display in a portrait view or a landscape view based on an analysis of data received from the one or more accelerometers. Device **100** optionally includes, in addition to accelerometer(s) **168**, a magnetometer and a GPS (or GLONASS or other global navigation system) receiver for obtaining information concerning the location and orientation (e.g., portrait or landscape) of device **100**.

In some embodiments, the software components stored in memory **102** include operating system **126**, communication module (or set of instructions) **128**, contact/motion module (or set of instructions) **130**, graphics module (or set of instructions) **132**, text input module (or set of instructions) **134**, Global Positioning System (GPS) module (or set of instructions) **135**, and applications (or sets of instructions) **136**. Furthermore, in some embodiments, memory **102** (FIG. **1**A) or **370** (FIG. **3**) stores device/global internal state **157**, as shown in FIGS. **1**A and **3**. Device/global internal state **157** includes one or more of: active application state, indicating which applications, if any, are currently active; display state, indicating what applications, views or other information occupy various regions of touch screen display **112**; sensor state, including information obtained from the device's various sensors and input control devices **116**; and location information concerning the device's location and/or attitude.

Operating system **126** (e.g., Darwin, RTXC, LINUX, UNIX, OS X, iOS, WINDOWS, or an embedded operating system such as VxWorks) includes various software components and/or drivers for controlling and managing general system tasks (e.g., memory management, storage device control, power management, etc.) and facilitates communication between various hardware and software components.

Communication module **128** facilitates communication with other devices over one or more external ports **124** and also includes various software components for handling data received by RF circuitry **108** and/or external port **124**. External port **124** (e.g., Universal Serial Bus (USB), FIREWIRE, etc.) is adapted for coupling directly to other devices or indirectly over a network (e.g., the Internet, wireless LAN, etc.). In some embodiments, the external port is a multi-pin (e.g., 30-pin) connector that is the same as, or similar to and/or compatible with, the 30-pin connector used on iPod® (trademark of Apple Inc.) devices.

Contact/motion module **130** optionally detects contact with touch screen **112** (in conjunction with display controller **156**) and other touch-sensitive devices (e.g., a touchpad or physical click wheel). Contact/motion module **130** includes various software components for performing various operations related to detection of contact, such as determining if contact has occurred (e.g., detecting a finger-down event), determining an intensity of the contact (e.g., the force or pressure of the contact or a substitute for the force or pressure of the contact), determining if there is movement of the contact and tracking the movement across the touch-sensitive surface (e.g., detecting one or more finger-dragging events), and determining if the contact has ceased (e.g., detecting a finger-up event or a break in contact). Contact/motion module **130** receives contact data from the touch-sensitive surface. Determining movement of the point of contact, which is represented by a series of contact data, optionally includes determining speed (magnitude), velocity (magnitude and direction), and/or an acceleration (a change in magnitude and/or direction) of the point of contact. These operations are, optionally, applied to single contacts (e.g., one finger contacts) or to multiple simultaneous contacts (e.g., "multitouch"/multiple finger contacts). In some embodiments, contact/motion module **130** and display controller **156** detect contact on a touchpad.

In some embodiments, contact/motion module **130** uses a set of one or more intensity thresholds to determine whether an operation has been performed by a user (e.g., to determine whether a user has "clicked" on an icon). In some embodiments, at least a subset of the intensity thresholds are determined in accordance with software parameters (e.g., the intensity thresholds are not determined by the activation thresholds of particular physical actuators and can be adjusted without changing the physical hardware of device **100**). For example, a mouse "click" threshold of a trackpad or touch screen display can be set to any of a large range of predefined threshold values without changing the trackpad or touch screen display hardware. Additionally, in some implementations, a user of the device is provided with software settings for adjusting one or more of the set of intensity thresholds (e.g., by adjusting individual intensity thresholds and/or by adjusting a plurality of intensity thresholds at once with a system-level click "intensity" parameter).

Contact/motion module **130** optionally detects a gesture input by a user. Different gestures on the touch-sensitive surface have different contact patterns (e.g., different motions, timings, and/or intensities of detected contacts). Thus, a gesture is, optionally, detected by detecting a particular contact pattern. For example, detecting a finger tap gesture includes detecting a finger-down event followed by detecting a finger-up (liftoff) event at the same position (or substantially the same position) as the finger-down event (e.g., at the position of an icon). As another example, detecting a finger swipe gesture on the touch-sensitive surface includes detecting a finger-down event followed by detecting one or more finger-dragging events, and subsequently followed by detecting a finger-up (liftoff) event.

Graphics module **132** includes various known software components for rendering and displaying graphics on touch screen **112** or other display, including components for changing the visual impact (e.g., brightness, transparency, saturation, contrast, or other visual property) of graphics that are displayed. As used herein, the term "graphics" includes any object that can be displayed to a user, including, without limitation, text, web pages, icons (such as user-interface objects including soft keys), digital images, videos, animations, and the like.

In some embodiments, graphics module **132** stores data representing graphics to be used. Each graphic is, optionally, assigned a corresponding code. Graphics module **132** receives, from applications etc., one or more codes specifying graphics to be displayed along with, if necessary,

coordinate data and other graphic property data, and then generates screen image data to output to display controller **156**.

Haptic feedback module **133** includes various software components for generating instructions used by tactile output generator(s) **167** to produce tactile outputs at one or more locations on device **100** in response to user interactions with device **100**.

Text input module **134**, which is, optionally, a component of graphics module **132**, provides soft keyboards for entering text in various applications (e.g., contacts **137**, e-mail **140**, IM **141**, browser **147**, and any other application that needs text input).

GPS module **135** determines the location of the device and provides this information for use in various applications (e.g., to telephone **138** for use in location-based dialing; to camera **143** as picture/video metadata; and to applications that provide location-based services such as weather widgets, local yellow page widgets, and map/navigation widgets).

Applications **136** optionally include the following modules (or sets of instructions), or a subset or superset thereof:

- Contacts module **137** (sometimes called an address book or contact list);
- Telephone module **138**;
- Video conference module **139**;
- E-mail client module **140**;
- Instant messaging (IM) module **141**;
- Workout support module **142**;
- Camera module **143** for still and/or video images;
- Image management module **144**;
- Video player module;
- Music player module;
- Browser module **147**;
- Calendar module **148**;
- Widget modules **149**, which optionally include one or more of: weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, dictionary widget **149-5**, and other widgets obtained by the user, as well as user-created widgets **149-6**;
- Widget creator module **150** for making user-created widgets **149-6**;
- Search module **151**;
- Video and music player module **152**, which merges video player module and music player module;
- Notes module **153**;
- Map module **154**; and/or
- Online video module **155**.

Examples of other applications **136** that are, optionally, stored in memory **102** include other word processing applications, other image editing applications, drawing applications, presentation applications, JAVA-enabled applications, encryption, digital rights management, voice recognition, and voice replication.

In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, contacts module **137** are, optionally, used to manage an address book or contact list (e.g., stored in application internal state **192** of contacts module **137** in memory **102** or memory **370**), including: adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name; categorizing and sorting names; providing telephone numbers or e-mail addresses to initiate and/or facilitate communications by telephone **138**, video conference module **139**, e-mail **140**, or IM **141**; and so forth.

In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, telephone module **138** are optionally, used to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in contacts module **137**, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation, and disconnect or hang up when the conversation is completed. As noted above, the wireless communication optionally uses any of a plurality of communications standards, protocols, and technologies.

In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch screen **112**, display controller **156**, optical sensor **164**, optical sensor controller **158**, contact/motion module **130**, graphics module **132**, text input module **134**, contacts module **137**, and telephone module **138**, video conference module **139** includes executable instructions to initiate, conduct, and terminate a video conference between a user and one or more other participants in accordance with user instructions.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, e-mail client module **140** includes executable instructions to create, send, receive, and manage e-mail in response to user instructions. In conjunction with image management module **144**, e-mail client module **140** makes it very easy to create and send e-mails with still or video images taken with camera module **143**.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, the instant messaging module **141** includes executable instructions to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages, and to view received instant messages. In some embodiments, transmitted and/or received instant messages optionally include graphics, photos, audio files, video files and/or other attachments as are supported in an MMS and/or an Enhanced Messaging Service (EMS). As used herein, "instant messaging" refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, or IMPS).

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, GPS module **135**, map module **154**, and music player module, workout support module **142** includes executable instructions to create workouts (e.g., with time, distance, and/or calorie burning goals); communicate with workout sensors (sports devices); receive workout sensor data; calibrate sensors used to monitor a workout; select and play music for a workout; and display, store, and transmit workout data.

In conjunction with touch screen **112**, display controller **156**, optical sensor(s) **164**, optical sensor controller **158**, contact/motion module **130**, graphics module **132**, and image management module **144**, camera module **143** includes executable instructions to capture still images or video (including a video stream) and store them into memory **102**, modify characteristics of a still image or video, or delete a still image or video from memory **102**.

In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, and camera module **143**, image management module **144** includes executable instructions to arrange, modify (e.g., edit), or otherwise manipulate, label, delete, present (e.g., in a digital slide show or album), and store still and/or video images.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, browser module **147** includes executable instructions to browse the Internet in accordance with user instructions, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, e-mail client module **140**, and browser module **147**, calendar module **148** includes executable instructions to create, display, modify, and store calendars and data associated with calendars (e.g., calendar entries, to-do lists, etc.) in accordance with user instructions.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, and browser module **147**, widget modules **149** are mini-applications that are, optionally, downloaded and used by a user (e.g., weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, and dictionary widget **149-5**) or created by the user (e.g., user-created widget **149-6**). In some embodiments, a widget includes an HTML (Hypertext Markup Language) file, a CSS (Cascading Style Sheets) file, and a JavaScript file. In some embodiments, a widget includes an XML (Extensible Markup Language) file and a JavaScript file (e.g., Yahoo! Widgets).

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, and browser module **147**, the widget creator module **150** are, optionally, used by a user to create widgets (e.g., turning a user-specified portion of a web page into a widget).

In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, search module **151** includes executable instructions to search for text, music, sound, image, video, and/or other files in memory **102** that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions.

In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, and browser module **147**, video and music player module **152** includes executable instructions that allow the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files, and executable instructions to display, present, or otherwise play back videos (e.g., on touch screen **112** or on an external, connected display via external port **124**). In some embodiments, device **100** optionally includes the functionality of an MP3 player, such as an iPod (trademark of Apple Inc.).

In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, notes module **153** includes executable instructions to create and manage notes, to-do lists, and the like in accordance with user instructions.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, GPS module **135**, and browser module **147**, map module **154** are, optionally, used to receive, display, modify, and store maps and data associated with maps (e.g., driving directions, data on stores and other points of interest at or near a particular location, and other location-based data) in accordance with user instructions.

In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, text input module **134**, e-mail client module **140**, and browser module **147**, online video module **155** includes instructions that allow the user to access, browse, receive (e.g., by streaming and/or download), play back (e.g., on the touch screen or on an external, connected display via external port **124**), send an e-mail with a link to a particular online video, and otherwise manage online videos in one or more file formats, such as H.264. In some embodiments, instant messaging module **141**, rather than e-mail client module **140**, is used to send a link to a particular online video. Additional description of the online video application can be found in U.S. Provisional Patent Application No. 60/936,562, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Jun. 20, 2007, and U.S. patent application Ser. No. 11/968,067, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Dec. 31, 2007, the contents of which are hereby incorporated by reference in their entirety.

Each of the above-identified modules and applications corresponds to a set of executable instructions for performing one or more functions described above and the methods described in this application (e.g., the computer-implemented methods and other information processing methods described herein). These modules (e.g., sets of instructions) need not be implemented as separate software programs (such as computer programs (e.g., including instructions)), procedures, or modules, and thus various subsets of these modules are, optionally, combined or otherwise rearranged in various embodiments. For example, video player module is, optionally, combined with music player module into a single module (e.g., video and music player module **152**, FIG. **1**A). In some embodiments, memory **102** optionally stores a subset of the modules and data structures identified above. Furthermore, memory **102** optionally stores additional modules and data structures not described above.

In some embodiments, device **100** is a device where operation of a predefined set of functions on the device is performed exclusively through a touch screen and/or a touchpad. By using a touch screen and/or a touchpad as the primary input control device for operation of device **100**, the number of physical input control devices (such as push buttons, dials, and the like) on device **100** is, optionally, reduced.

The predefined set of functions that are performed exclusively through a touch screen and/or a touchpad optionally include navigation between user interfaces. In some embodiments, the touchpad, when touched by the user, navigates device **100** to a main, home, or root menu from any user interface that is displayed on device **100**. In such embodiments, a "menu button" is implemented using a touchpad. In some other embodiments, the menu button is a physical push button or other physical input control device instead of a touchpad.

FIG. **1**B is a block diagram illustrating exemplary components for event handling in accordance with some embodiments. In some embodiments, memory **102** (FIG. **1**A) or **370** (FIG. **3**) includes event sorter **170** (e.g., in

operating system **126**) and a respective application **136-1** (e.g., any of the aforementioned applications **137-151**, **155**, **380-390**).

Event sorter **170** receives event information and determines the application **136-1** and application view **191** of application **136-1** to which to deliver the event information. Event sorter **170** includes event monitor **171** and event dispatcher module **174**. In some embodiments, application **136-1** includes application internal state **192**, which indicates the current application view(s) displayed on touch-sensitive display **112** when the application is active or executing. In some embodiments, device/global internal state **157** is used by event sorter **170** to determine which application(s) is (are) currently active, and application internal state **192** is used by event sorter **170** to determine application views **191** to which to deliver event information.

In some embodiments, application internal state **192** includes additional information, such as one or more of: resume information to be used when application **136-1** resumes execution, user interface state information that indicates information being displayed or that is ready for display by application **136-1**, a state queue for enabling the user to go back to a prior state or view of application **136-1**, and a redo/undo queue of previous actions taken by the user.

Event monitor **171** receives event information from peripherals interface **118**. Event information includes information about a sub-event (e.g., a user touch on touch-sensitive display **112**, as part of a multi-touch gesture). Peripherals interface **118** transmits information it receives from I/O subsystem **106** or a sensor, such as proximity sensor **166**, accelerometer(s) **168**, and/or microphone **113** (through audio circuitry **110**). Information that peripherals interface **118** receives from I/O subsystem **106** includes information from touch-sensitive display **112** or a touch-sensitive surface.

In some embodiments, event monitor **171** sends requests to the peripherals interface **118** at predetermined intervals. In response, peripherals interface **118** transmits event information. In other embodiments, peripherals interface **118** transmits event information only when there is a significant event (e.g., receiving an input above a predetermined noise threshold and/or for more than a predetermined duration).

In some embodiments, event sorter **170** also includes a hit view determination module **172** and/or an active event recognizer determination module **173**.

Hit view determination module **172** provides software procedures for determining where a sub-event has taken place within one or more views when touch-sensitive display **112** displays more than one view. Views are made up of controls and other elements that a user can see on the display.

Another aspect of the user interface associated with an application is a set of views, sometimes herein called application views or user interface windows, in which information is displayed and touch-based gestures occur. The application views (of a respective application) in which a touch is detected optionally correspond to programmatic levels within a programmatic or view hierarchy of the application. For example, the lowest level view in which a touch is detected is, optionally, called the hit view, and the set of events that are recognized as proper inputs are, optionally, determined based, at least in part, on the hit view of the initial touch that begins a touch-based gesture.

Hit view determination module **172** receives information related to sub-events of a touch-based gesture. When an application has multiple views organized in a hierarchy, hit view determination module **172** identifies a hit view as the lowest view in the hierarchy which should handle the sub-event. In most circumstances, the hit view is the lowest level view in which an initiating sub-event occurs (e.g., the first sub-event in the sequence of sub-events that form an event or potential event). Once the hit view is identified by the hit view determination module **172**, the hit view typically receives all sub-events related to the same touch or input source for which it was identified as the hit view.

Active event recognizer determination module **173** determines which view or views within a view hierarchy should receive a particular sequence of sub-events. In some embodiments, active event recognizer determination module **173** determines that only the hit view should receive a particular sequence of sub-events. In other embodiments, active event recognizer determination module **173** determines that all views that include the physical location of a sub-event are actively involved views, and therefore determines that all actively involved views should receive a particular sequence of sub-events. In other embodiments, even if touch sub-events were entirely confined to the area associated with one particular view, views higher in the hierarchy would still remain as actively involved views.

Event dispatcher module **174** dispatches the event information to an event recognizer (e.g., event recognizer **180**). In embodiments including active event recognizer determination module **173**, event dispatcher module **174** delivers the event information to an event recognizer determined by active event recognizer determination module **173**. In some embodiments, event dispatcher module **174** stores in an event queue the event information, which is retrieved by a respective event receiver **182**.

In some embodiments, operating system **126** includes event sorter **170**. Alternatively, application **136-1** includes event sorter **170**. In yet other embodiments, event sorter **170** is a stand-alone module, or a part of another module stored in memory **102**, such as contact/motion module **130**.

In some embodiments, application **136-1** includes a plurality of event handlers **190** and one or more application views **191**, each of which includes instructions for handling touch events that occur within a respective view of the application's user interface. Each application view **191** of the application **136-1** includes one or more event recognizers **180**. Typically, a respective application view **191** includes a plurality of event recognizers **180**. In other embodiments, one or more of event recognizers **180** are part of a separate module, such as a user interface kit or a higher level object from which application **136-1** inherits methods and other properties. In some embodiments, a respective event handler **190** includes one or more of: data updater **176**, object updater **177**, GUI updater **178**, and/or event data **179** received from event sorter **170**. Event handler **190** optionally utilizes or calls data updater **176**, object updater **177**, or GUI updater **178** to update the application internal state **192**. Alternatively, one or more of the application views **191** include one or more respective event handlers **190**. Also, in some embodiments, one or more of data updater **176**, object updater **177**, and GUI updater **178** are included in a respective application view **191**.

A respective event recognizer **180** receives event information (e.g., event data **179**) from event sorter **170** and identifies an event from the event information. Event recognizer **180** includes event receiver **182** and event comparator **184**. In some embodiments, event recognizer **180** also includes at least a subset of: metadata **183**, and event delivery instructions **188** (which optionally include sub-event delivery instructions).

Event receiver **182** receives event information from event sorter **170**. The event information includes information about a sub-event, for example, a touch or a touch movement. Depending on the sub-event, the event information also includes additional information, such as location of the sub-event. When the sub-event concerns motion of a touch, the event information optionally also includes speed and direction of the sub-event. In some embodiments, events include rotation of the device from one orientation to another (e.g., from a portrait orientation to a landscape orientation, or vice versa), and the event information includes corresponding information about the current orientation (also called device attitude) of the device.

Event comparator **184** compares the event information to predefined event or sub-event definitions and, based on the comparison, determines an event or sub-event, or determines or updates the state of an event or sub-event. In some embodiments, event comparator **184** includes event definitions **186**. Event definitions **186** contain definitions of events (e.g., predefined sequences of sub-events), for example, event **1** (**187-1**), event **2** (**187-2**), and others. In some embodiments, sub-events in an event (**187**) include, for example, touch begin, touch end, touch movement, touch cancellation, and multiple touching. In one example, the definition for event **1** (**187-1**) is a double tap on a displayed object. The double tap, for example, comprises a first touch (touch begin) on the displayed object for a predetermined phase, a first liftoff (touch end) for a predetermined phase, a second touch (touch begin) on the displayed object for a predetermined phase, and a second liftoff (touch end) for a predetermined phase. In another example, the definition for event **2** (**187-2**) is a dragging on a displayed object. The dragging, for example, comprises a touch (or contact) on the displayed object for a predetermined phase, a movement of the touch across touch-sensitive display **112**, and liftoff of the touch (touch end). In some embodiments, the event also includes information for one or more associated event handlers **190**.

In some embodiments, event definition **187** includes a definition of an event for a respective user-interface object. In some embodiments, event comparator **184** performs a hit test to determine which user-interface object is associated with a sub-event. For example, in an application view in which three user-interface objects are displayed on touch-sensitive display **112**, when a touch is detected on touch-sensitive display **112**, event comparator **184** performs a hit test to determine which of the three user-interface objects is associated with the touch (sub-event). If each displayed object is associated with a respective event handler **190**, the event comparator uses the result of the hit test to determine which event handler **190** should be activated. For example, event comparator **184** selects an event handler associated with the sub-event and the object triggering the hit test.

In some embodiments, the definition for a respective event (**187**) also includes delayed actions that delay delivery of the event information until after it has been determined whether the sequence of sub-events does or does not correspond to the event recognizer's event type.

When a respective event recognizer **180** determines that the series of sub-events do not match any of the events in event definitions **186**, the respective event recognizer **180** enters an event impossible, event failed, or event ended state, after which it disregards subsequent sub-events of the touch-based gesture. In this situation, other event recognizers, if any, that remain active for the hit view continue to track and process sub-events of an ongoing touch-based gesture.

In some embodiments, a respective event recognizer **180** includes metadata **183** with configurable properties, flags, and/or lists that indicate how the event delivery system should perform sub-event delivery to actively involved event recognizers. In some embodiments, metadata **183** includes configurable properties, flags, and/or lists that indicate how event recognizers interact, or are enabled to interact, with one another. In some embodiments, metadata **183** includes configurable properties, flags, and/or lists that indicate whether sub-events are delivered to varying levels in the view or programmatic hierarchy.

In some embodiments, a respective event recognizer **180** activates event handler **190** associated with an event when one or more particular sub-events of an event are recognized. In some embodiments, a respective event recognizer **180** delivers event information associated with the event to event handler **190**. Activating an event handler **190** is distinct from sending (and deferred sending) sub-events to a respective hit view. In some embodiments, event recognizer **180** throws a flag associated with the recognized event, and event handler **190** associated with the flag catches the flag and performs a predefined process.

In some embodiments, event delivery instructions **188** include sub-event delivery instructions that deliver event information about a sub-event without activating an event handler. Instead, the sub-event delivery instructions deliver event information to event handlers associated with the series of sub-events or to actively involved views. Event handlers associated with the series of sub-events or with actively involved views receive the event information and perform a predetermined process.

In some embodiments, data updater **176** creates and updates data used in application **136-1**. For example, data updater **176** updates the telephone number used in contacts module **137**, or stores a video file used in video player module. In some embodiments, object updater **177** creates and updates objects used in application **136-1**. For example, object updater **177** creates a new user-interface object or updates the position of a user-interface object. GUI updater **178** updates the GUI. For example, GUI updater **178** prepares display information and sends it to graphics module **132** for display on a touch-sensitive display.

In some embodiments, event handler(s) **190** includes or has access to data updater **176**, object updater **177**, and GUI updater **178**. In some embodiments, data updater **176**, object updater **177**, and GUI updater **178** are included in a single module of a respective application **136-1** or application view **191**. In other embodiments, they are included in two or more software modules.

It shall be understood that the foregoing discussion regarding event handling of user touches on touch-sensitive displays also applies to other forms of user inputs to operate multifunction devices **100** with input devices, not all of which are initiated on touch screens. For example, mouse movement and mouse button presses, optionally coordinated with single or multiple keyboard presses or holds; contact movements such as taps, drags, scrolls, etc. on touchpads; pen stylus inputs; movement of the device; oral instructions; detected eye movements; biometric inputs; and/or any combination thereof are optionally utilized as inputs corresponding to sub-events which define an event to be recognized.

FIG. **2** illustrates a portable multifunction device **100** having a touch screen **112** in accordance with some embodiments. The touch screen optionally displays one or more graphics within user interface (UI) **200**. In this embodiment, as well as others described below, a user is enabled to select one or more of the graphics by making a gesture on the

graphics, for example, with one or more fingers **202** (not drawn to scale in the figure) or one or more styluses **203** (not drawn to scale in the figure). In some embodiments, selection of one or more graphics occurs when the user breaks contact with the one or more graphics. In some embodiments, the gesture optionally includes one or more taps, one or more swipes (from left to right, right to left, upward and/or downward), and/or a rolling of a finger (from right to left, left to right, upward and/or downward) that has made contact with device **100**. In some implementations or circumstances, inadvertent contact with a graphic does not select the graphic. For example, a swipe gesture that sweeps over an application icon optionally does not select the corresponding application when the gesture corresponding to selection is a tap.

Device **100** optionally also include one or more physical buttons, such as "home" or menu button **204**. As described previously, menu button **204** is, optionally, used to navigate to any application **136** in a set of applications that are, optionally, executed on device **100**. Alternatively, in some embodiments, the menu button is implemented as a soft key in a GUI displayed on touch screen **112**.

In some embodiments, device **100** includes touch screen **112**, menu button **204**, push button **206** for powering the device on/off and locking the device, volume adjustment button(s) **208**, subscriber identity module (SIM) card slot **210**, headset jack **212**, and docking/charging external port **124**. Push button **206** is, optionally, used to turn the power on/off on the device by depressing the button and holding the button in the depressed state for a predefined time interval; to lock the device by depressing the button and releasing the button before the predefined time interval has elapsed; and/or to unlock the device or initiate an unlock process. In an alternative embodiment, device **100** also accepts verbal input for activation or deactivation of some functions through microphone **113**. Device **100** also, optionally, includes one or more contact intensity sensors **165** for detecting intensity of contacts on touch screen **112** and/or one or more tactile output generators **167** for generating tactile outputs for a user of device **100**.

FIG. **3** is a block diagram of an exemplary multifunction device with a display and a touch-sensitive surface in accordance with some embodiments. Device **300** need not be portable. In some embodiments, device **300** is a laptop computer, a desktop computer, a tablet computer, a multimedia player device, a navigation device, an educational device (such as a child's learning toy), a gaming system, or a control device (e.g., a home or industrial controller). Device **300** typically includes one or more processing units (CPUs) **310**, one or more network or other communications interfaces **360**, memory **370**, and one or more communication buses **320** for interconnecting these components. Communication buses **320** optionally include circuitry (sometimes called a chipset) that interconnects and controls communications between system components. Device **300** includes input/output (I/O) interface **330** comprising display **340**, which is typically a touch screen display. I/O interface **330** also optionally includes a keyboard and/or mouse (or other pointing device) **350** and touchpad **355**, tactile output generator **357** for generating tactile outputs on device **300** (e.g., similar to tactile output generator(s) **167** described above with reference to FIG. **1**A), sensors **359** (e.g., optical, acceleration, proximity, touch-sensitive, and/or contact intensity sensors similar to contact intensity sensor(s) **165** described above with reference to FIG. **1**A). Memory **370** includes high-speed random access memory, such as DRAM, SRAM, DDR RAM, or other random access solid state memory devices; and optionally includes non-volatile memory, such as one or more magnetic disk storage devices, optical disk storage devices, flash memory devices, or other non-volatile solid state storage devices. Memory **370** optionally includes one or more storage devices remotely located from CPU(s) **310**. In some embodiments, memory **370** stores programs, modules, and data structures analogous to the programs, modules, and data structures stored in memory **102** of portable multifunction device **100** (FIG. **1**A), or a subset thereof. Furthermore, memory **370** optionally stores additional programs, modules, and data structures not present in memory **102** of portable multifunction device **100**. For example, memory **370** of device **300** optionally stores drawing module **380**, presentation module **382**, word processing module **384**, website creation module **386**, disk authoring module **388**, and/or spreadsheet module **390**, while memory **102** of portable multifunction device **100** (FIG. **1**A) optionally does not store these modules.

Each of the above-identified elements in FIG. **3** is, optionally, stored in one or more of the previously mentioned memory devices. Each of the above-identified modules corresponds to a set of instructions for performing a function described above. The above-identified modules or computer programs (e.g., sets of instructions or including instructions) need not be implemented as separate software programs (such as computer programs (e.g., including instructions)), procedures, or modules, and thus various subsets of these modules are, optionally, combined or otherwise rearranged in various embodiments. In some embodiments, memory **370** optionally stores a subset of the modules and data structures identified above. Furthermore, memory **370** optionally stores additional modules and data structures not described above.

Attention is now directed towards embodiments of user interfaces that are, optionally, implemented on, for example, portable multifunction device **100**.

FIG. **4**A illustrates an exemplary user interface for a menu of applications on portable multifunction device **100** in accordance with some embodiments. Similar user interfaces are, optionally, implemented on device **300**. In some embodiments, user interface **400** includes the following elements, or a subset or superset thereof:

- Signal strength indicator(s) **402** for wireless communication(s), such as cellular and Wi-Fi signals;
- Time **404**;
- Bluetooth indicator **405**;
- Battery status indicator **406**;
- Tray **408** with icons for frequently used applications, such as:
  - Icon **416** for telephone module **138**, labeled "Phone," which optionally includes an indicator **414** of the number of missed calls or voicemail messages;
  - Icon **418** for e-mail client module **140**, labeled "Mail," which optionally includes an indicator **410** of the number of unread e-mails;
  - Icon **420** for browser module **147**, labeled "Browser;" and
  - Icon **422** for video and music player module **152**, also referred to as iPod (trademark of Apple Inc.) module **152**, labeled "iPod;" and
- Icons for other applications, such as:
  - Icon **424** for IM module **141**, labeled "Messages;"
  - Icon **426** for calendar module **148**, labeled "Calendar;"
  - Icon **428** for image management module **144**, labeled "Photos;"
  - Icon **430** for camera module **143**, labeled "Camera;"

Icon **432** for online video module **155**, labeled "Online Video;"

Icon **434** for stocks widget **149-2**, labeled "Stocks;"

Icon **436** for map module **154**, labeled "Maps;"

Icon **438** for weather widget **149-1**, labeled "Weather;"

Icon **440** for alarm clock widget **149-4**, labeled "Clock;"

Icon **442** for workout support module **142**, labeled "Workout Support;"

Icon **444** for notes module **153**, labeled "Notes;" and

Icon **446** for a settings application or module, labeled "Settings," which provides access to settings for device **100** and its various applications **136**.

It should be noted that the icon labels illustrated in FIG. **4**A are merely exemplary. For example, icon **422** for video and music player module **152** is labeled "Music" or "Music Player." Other labels are, optionally, used for various application icons. In some embodiments, a label for a respective application icon includes a name of an application corresponding to the respective application icon. In some embodiments, a label for a particular application icon is distinct from a name of an application corresponding to the particular application icon.

FIG. **4**B illustrates an exemplary user interface on a device (e.g., device **300**, FIG. **3**) with a touch-sensitive surface **451** (e.g., a tablet or touchpad **355**, FIG. **3**) that is separate from the display **450** (e.g., touch screen display **112**). Device **300** also, optionally, includes one or more contact intensity sensors (e.g., one or more of sensors **359**) for detecting intensity of contacts on touch-sensitive surface **451** and/or one or more tactile output generators **357** for generating tactile outputs for a user of device **300**.

Although some of the examples that follow will be given with reference to inputs on touch screen display **112** (where the touch-sensitive surface and the display are combined), in some embodiments, the device detects inputs on a touch-sensitive surface that is separate from the display, as shown in FIG. **4**B. In some embodiments, the touch-sensitive surface (e.g., **451** in FIG. **4**B) has a primary axis (e.g., **452** in FIG. **4**B) that corresponds to a primary axis (e.g., **453** in FIG. **4**B) on the display (e.g., **450**). In accordance with these embodiments, the device detects contacts (e.g., **460** and **462** in FIG. **4**B) with the touch-sensitive surface **451** at locations that correspond to respective locations on the display (e.g., in FIG. **4**B, **460** corresponds to **468** and **462** corresponds to **470**). In this way, user inputs (e.g., contacts **460** and **462**, and movements thereof) detected by the device on the touch-sensitive surface (e.g., **451** in FIG. **4**B) are used by the device to manipulate the user interface on the display (e.g., **450** in FIG. **4**B) of the multifunction device when the touch-sensitive surface is separate from the display. It should be understood that similar methods are, optionally, used for other user interfaces described herein.

Additionally, while the following examples are given primarily with reference to finger inputs (e.g., finger contacts, finger tap gestures, finger swipe gestures), it should be understood that, in some embodiments, one or more of the finger inputs are replaced with input from another input device (e.g., a mouse-based input or stylus input). For example, a swipe gesture is, optionally, replaced with a mouse click (e.g., instead of a contact) followed by movement of the cursor along the path of the swipe (e.g., instead of movement of the contact). As another example, a tap gesture is, optionally, replaced with a mouse click while the cursor is located over the location of the tap gesture (e.g., instead of detection of the contact followed by ceasing to detect the contact). Similarly, when multiple user inputs are simultaneously detected, it should be understood that multiple computer mice are, optionally, used simultaneously, or a mouse and finger contacts are, optionally, used simultaneously.

FIG. **5**A illustrates exemplary personal electronic device **500**. Device **500** includes body **502**. In some embodiments, device **500** can include some or all of the features described with respect to devices **100** and **300** (e.g., FIGS. **1**A-**4**B). In some embodiments, device **500** has touch-sensitive display screen **504**, hereafter touch screen **504**. Alternatively, or in addition to touch screen **504**, device **500** has a display and a touch-sensitive surface. As with devices **100** and **300**, in some embodiments, touch screen **504** (or the touch-sensitive surface) optionally includes one or more intensity sensors for detecting intensity of contacts (e.g., touches) being applied. The one or more intensity sensors of touch screen **504** (or the touch-sensitive surface) can provide output data that represents the intensity of touches. The user interface of device **500** can respond to touches based on their intensity, meaning that touches of different intensities can invoke different user interface operations on device **500**.

Exemplary techniques for detecting and processing touch intensity are found, for example, in related applications: International Patent Application Serial No. PCT/US2013/040061, titled "Device, Method, and Graphical User Interface for Displaying User Interface Objects Corresponding to an Application," filed May 8, 2013, published as WIPO Publication No. WO/2013/169849, and International Patent Application Serial No. PCT/US2013/069483, titled "Device, Method, and Graphical User Interface for Transitioning Between Touch Input to Display Output Relationships," filed Nov. 11, 2013, published as WIPO Publication No. WO/2014/105276, each of which is hereby incorporated by reference in their entirety.

In some embodiments, device **500** has one or more input mechanisms **506** and **508**. Input mechanisms **506** and **508**, if included, can be physical. Examples of physical input mechanisms include push buttons and rotatable mechanisms. In some embodiments, device **500** has one or more attachment mechanisms. Such attachment mechanisms, if included, can permit attachment of device **500** with, for example, hats, eyewear, earrings, necklaces, shirts, jackets, bracelets, watch straps, chains, trousers, belts, shoes, purses, backpacks, and so forth. These attachment mechanisms permit device **500** to be worn by a user.

FIG. **5**B depicts exemplary personal electronic device **500**. In some embodiments, device **500** can include some or all of the components described with respect to FIGS. **1**A, **1**B, and **3**. Device **500** has bus **512** that operatively couples I/O section **514** with one or more computer processors **516** and memory **518**. I/O section **514** can be connected to display **504**, which can have touch-sensitive component **522** and, optionally, intensity sensor **524** (e.g., contact intensity sensor). In addition, I/O section **514** can be connected with communication unit **530** for receiving application and operating system data, using Wi-Fi, Bluetooth, near field communication (NFC), cellular, and/or other wireless communication techniques. Device **500** can include input mechanisms **506** and/or **508**. Input mechanism **506** is, optionally, a rotatable input device or a depressible and rotatable input device, for example. Input mechanism **508** is, optionally, a button, in some examples.

Input mechanism **508** is, optionally, a microphone, in some examples. Personal electronic device **500** optionally includes various sensors, such as GPS sensor **532**, accelerometer **534**, directional sensor **540** (e.g., compass), gyro-

scope **536**, motion sensor **538**, and/or a combination thereof, all of which can be operatively connected to I/O section **514**.

Memory **518** of personal electronic device **500** can include one or more non-transitory computer-readable storage mediums, for storing computer-executable instructions, which, when executed by one or more computer processors **516**, for example, can cause the computer processors to perform the techniques described below, including process **700** (FIG. **7**). A computer-readable storage medium can be any medium that can tangibly contain or store computer-executable instructions for use by or in connection with the instruction execution system, apparatus, or device. In some examples, the storage medium is a transitory computer-readable storage medium. In some examples, the storage medium is a non-transitory computer-readable storage medium. The non-transitory computer-readable storage medium can include, but is not limited to, magnetic, optical, and/or semiconductor storages. Examples of such storage include magnetic disks, optical discs based on CD, DVD, or Blu-ray technologies, as well as persistent solid-state memory such as flash, solid-state drives, and the like. Personal electronic device **500** is not limited to the components and configuration of FIG. **5**B, but can include other or additional components in multiple configurations.

As used here, the term "affordance" refers to a user-interactive graphical user interface object that is, optionally, displayed on the display screen of devices **100**, **300**, and/or **500** (FIGS. **1**A, **3**, and **5**A-**5**B). For example, an image (e.g., icon), a button, and text (e.g., hyperlink) each optionally constitute an affordance.

As used herein, the term "focus selector" refers to an input element that indicates a current part of a user interface with which a user is interacting. In some implementations that include a cursor or other location marker, the cursor acts as a "focus selector" so that when an input (e.g., a press input) is detected on a touch-sensitive surface (e.g., touchpad **355** in FIG. **3** or touch-sensitive surface **451** in FIG. **4**B) while the cursor is over a particular user interface element (e.g., a button, window, slider, or other user interface element), the particular user interface element is adjusted in accordance with the detected input. In some implementations that include a touch screen display (e.g., touch-sensitive display system **112** in FIG. **1**A or touch screen **112** in FIG. **4**A) that enables direct interaction with user interface elements on the touch screen display, a detected contact on the touch screen acts as a "focus selector" so that when an input (e.g., a press input by the contact) is detected on the touch screen display at a location of a particular user interface element (e.g., a button, window, slider, or other user interface element), the particular user interface element is adjusted in accordance with the detected input. In some implementations, focus is moved from one region of a user interface to another region of the user interface without corresponding movement of a cursor or movement of a contact on a touch screen display (e.g., by using a tab key or arrow keys to move focus from one button to another button); in these implementations, the focus selector moves in accordance with movement of focus between different regions of the user interface. Without regard to the specific form taken by the focus selector, the focus selector is generally the user interface element (or contact on a touch screen display) that is controlled by the user so as to communicate the user's intended interaction with the user interface (e.g., by indicating, to the device, the element of the user interface with which the user is intending to interact). For example, the location of a focus selector (e.g., a cursor, a contact, or a selection box) over a respective button while a press input is detected on the touch-sensitive surface (e.g., a touchpad or touch screen) will indicate that the user is intending to activate the respective button (as opposed to other user interface elements shown on a display of the device).

As used in the specification and claims, the term "characteristic intensity" of a contact refers to a characteristic of the contact based on one or more intensities of the contact. In some embodiments, the characteristic intensity is based on multiple intensity samples. The characteristic intensity is, optionally, based on a predefined number of intensity samples, or a set of intensity samples collected during a predetermined time period (e.g., 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10 seconds) relative to a predefined event (e.g., after detecting the contact, prior to detecting liftoff of the contact, before or after detecting a start of movement of the contact, prior to detecting an end of the contact, before or after detecting an increase in intensity of the contact, and/or before or after detecting a decrease in intensity of the contact). A characteristic intensity of a contact is, optionally, based on one or more of: a maximum value of the intensities of the contact, a mean value of the intensities of the contact, an average value of the intensities of the contact, a top 10 percentile value of the intensities of the contact, a value at the half maximum of the intensities of the contact, a value at the 90 percent maximum of the intensities of the contact, or the like. In some embodiments, the duration of the contact is used in determining the characteristic intensity (e.g., when the characteristic intensity is an average of the intensity of the contact over time). In some embodiments, the characteristic intensity is compared to a set of one or more intensity thresholds to determine whether an operation has been performed by a user. For example, the set of one or more intensity thresholds optionally includes a first intensity threshold and a second intensity threshold. In this example, a contact with a characteristic intensity that does not exceed the first threshold results in a first operation, a contact with a characteristic intensity that exceeds the first intensity threshold and does not exceed the second intensity threshold results in a second operation, and a contact with a characteristic intensity that exceeds the second threshold results in a third operation. In some embodiments, a comparison between the characteristic intensity and one or more thresholds is used to determine whether or not to perform one or more operations (e.g., whether to perform a respective operation or forgo performing the respective operation), rather than being used to determine whether to perform a first operation or a second operation.

In some embodiments, a portion of a gesture is identified for purposes of determining a characteristic intensity. For example, a touch-sensitive surface optionally receives a continuous swipe contact transitioning from a start location and reaching an end location, at which point the intensity of the contact increases. In this example, the characteristic intensity of the contact at the end location is, optionally, based on only a portion of the continuous swipe contact, and not the entire swipe contact (e.g., only the portion of the swipe contact at the end location). In some embodiments, a smoothing algorithm is, optionally, applied to the intensities of the swipe contact prior to determining the characteristic intensity of the contact. For example, the smoothing algorithm optionally includes one or more of: an unweighted sliding-average smoothing algorithm, a triangular smoothing algorithm, a median filter smoothing algorithm, and/or an exponential smoothing algorithm. In some circumstances, these smoothing algorithms eliminate narrow spikes or dips in the intensities of the swipe contact for purposes of determining a characteristic intensity.

The intensity of a contact on the touch-sensitive surface is, optionally, characterized relative to one or more intensity thresholds, such as a contact-detection intensity threshold, a light press intensity threshold, a deep press intensity threshold, and/or one or more other intensity thresholds. In some embodiments, the light press intensity threshold corresponds to an intensity at which the device will perform operations typically associated with clicking a button of a physical mouse or a trackpad. In some embodiments, the deep press intensity threshold corresponds to an intensity at which the device will perform operations that are different from operations typically associated with clicking a button of a physical mouse or a trackpad. In some embodiments, when a contact is detected with a characteristic intensity below the light press intensity threshold (e.g., and above a nominal contact-detection intensity threshold below which the contact is no longer detected), the device will move a focus selector in accordance with movement of the contact on the touch-sensitive surface without performing an operation associated with the light press intensity threshold or the deep press intensity threshold. Generally, unless otherwise stated, these intensity thresholds are consistent between different sets of user interface figures.

An increase of characteristic intensity of the contact from an intensity below the light press intensity threshold to an intensity between the light press intensity threshold and the deep press intensity threshold is sometimes referred to as a "light press" input. An increase of characteristic intensity of the contact from an intensity below the deep press intensity threshold to an intensity above the deep press intensity threshold is sometimes referred to as a "deep press" input. An increase of characteristic intensity of the contact from an intensity below the contact-detection intensity threshold to an intensity between the contact-detection intensity threshold and the light press intensity threshold is sometimes referred to as detecting the contact on the touch-surface. A decrease of characteristic intensity of the contact from an intensity above the contact-detection intensity threshold to an intensity below the contact-detection intensity threshold is sometimes referred to as detecting liftoff of the contact from the touch-surface. In some embodiments, the contact-detection intensity threshold is zero. In some embodiments, the contact-detection intensity threshold is greater than zero.

In some embodiments described herein, one or more operations are performed in response to detecting a gesture that includes a respective press input or in response to detecting the respective press input performed with a respective contact (or a plurality of contacts), where the respective press input is detected based at least in part on detecting an increase in intensity of the contact (or plurality of contacts) above a press-input intensity threshold. In some embodiments, the respective operation is performed in response to detecting the increase in intensity of the respective contact above the press-input intensity threshold (e.g., a "down stroke" of the respective press input). In some embodiments, the press input includes an increase in intensity of the respective contact above the press-input intensity threshold and a subsequent decrease in intensity of the contact below the press-input intensity threshold, and the respective operation is performed in response to detecting the subsequent decrease in intensity of the respective contact below the press-input threshold (e.g., an "up stroke" of the respective press input).

In some embodiments, the device employs intensity hysteresis to avoid accidental inputs sometimes termed "jitter," where the device defines or selects a hysteresis intensity threshold with a predefined relationship to the press-input intensity threshold (e.g., the hysteresis intensity threshold is X intensity units lower than the press-input intensity threshold or the hysteresis intensity threshold is 75%, 90%, or some reasonable proportion of the press-input intensity threshold). Thus, in some embodiments, the press input includes an increase in intensity of the respective contact above the press-input intensity threshold and a subsequent decrease in intensity of the contact below the hysteresis intensity threshold that corresponds to the press-input intensity threshold, and the respective operation is performed in response to detecting the subsequent decrease in intensity of the respective contact below the hysteresis intensity threshold (e.g., an "up stroke" of the respective press input). Similarly, in some embodiments, the press input is detected only when the device detects an increase in intensity of the contact from an intensity at or below the hysteresis intensity threshold to an intensity at or above the press-input intensity threshold and, optionally, a subsequent decrease in intensity of the contact to an intensity at or below the hysteresis intensity, and the respective operation is performed in response to detecting the press input (e.g., the increase in intensity of the contact or the decrease in intensity of the contact, depending on the circumstances).

For ease of explanation, the descriptions of operations performed in response to a press input associated with a press-input intensity threshold or in response to a gesture including the press input are, optionally, triggered in response to detecting either: an increase in intensity of a contact above the press-input intensity threshold, an increase in intensity of a contact from an intensity below the hysteresis intensity threshold to an intensity above the press-input intensity threshold, a decrease in intensity of the contact below the press-input intensity threshold, and/or a decrease in intensity of the contact below the hysteresis intensity threshold corresponding to the press-input intensity threshold. Additionally, in examples where an operation is described as being performed in response to detecting a decrease in intensity of a contact below the press-input intensity threshold, the operation is, optionally, performed in response to detecting a decrease in intensity of the contact below a hysteresis intensity threshold corresponding to, and lower than, the press-input intensity threshold.

As used herein, an "installed application" refers to a software application that has been downloaded onto an electronic device (e.g., devices **100**, **300**, and/or **500**) and is ready to be launched (e.g., become opened) on the device. In some embodiments, a downloaded application becomes an installed application by way of an installation program that extracts program portions from a downloaded package and integrates the extracted portions with the operating system of the computer system.

Attention is now directed towards embodiments of user interfaces ("UI") and associated processes that are implemented on an electronic device, such as portable multifunction device **100**, device **300**, or device **500**.

FIGS. **6A-6M** illustrate exemplary user interfaces for managing (e.g., obtaining, storing, editing, displaying, and/or sharing) a user interface (e.g., a watch face) that includes content related to an event for display on a computer system (e.g., a smartwatch), in accordance with some embodiments. The user interfaces in these figures are used to illustrate the processes described below, including the processes in FIG. **7**.

FIGS. **6A-6C** illustrate a method for adding to a computer system a watch face that includes content related to an event (e.g., a sporting event, a music concert, a store opening). In

the embodiment illustrated in FIGS. **6**A-**6**C, the event is a hot air balloon event (e.g., called "Super Air").

FIG. **6**A illustrates computer system **600** (e.g., a smartwatch) at a location **606** (e.g., a predetermined location, a geographic location, a building) associated with the event. In FIG. **6**A, physical object **610** (e.g., a kiosk) is positioned at the location of the event. In some embodiments, computer system **600** is considered (e.g., determined) to be at the event or the location associated with the event if computer system **600** is within a threshold proximity to the predetermined location. In some embodiments, computer system **600** provides user interfaces that allow a user to add to computer system **600** a watch face **620** (shown in FIG. **6**C) that includes content related to the event when computer system **600** is within the threshold proximity to the predetermined location **606**, and when a triggering condition is satisfied.

In FIG. **6**A, computer system **600** displays, via display generation component **602**, user interface **604** (e.g., a watch face). In the embodiment illustrated in FIG. **6**A, user interface **604** does not include content related to the event at which computer system **600** is located. In some embodiments, user interface **604** includes an indication of time **608** and one or more user interface elements (e.g., icons, affordances). In some embodiments, the user interface **604** includes one or more watch complications (e.g., also referred to as "complications").

In some embodiments, a complication refers to any watch face feature other than those used to indicate a time (e.g., clock hands or hour/minute/seconds indications). In some embodiments, complications provide (e.g., display) data obtained from an application. In some embodiments, a complication includes an affordance that when selected launches a corresponding application. In some embodiments, a complication is displayed at a fixed, predefined location on the display. In some embodiments, complications occupy respective locations at particular regions of a watch face (e.g., lower-right, lower-left, upper-right, and/or upper-left).

In FIG. **6**A, physical object **610** is located at location **606** of the event. In some embodiments, physical object **610** displays information **612** corresponding to an event (e.g., a barcode, a quick response (QR) code, a visual representation of a watch face that includes content related to the event). In some embodiments, physical object **610** generates signal **614** with information related to an event. In some embodiments, physical object **610** can be used to scan information (e.g., an electronic ticket for an event) displayed by computer system **600**. In some embodiments, physical object **610** (or a portion thereof) can be scanned by computer system **600** (e.g., using a sensor, such as a camera or RF sensor, of computer system **600**).

In FIG. **6**A, while computer system **600** is at the event, a determination is made that a triggering condition is satisfied. In some embodiments, the determination that the triggering condition is satisfied includes a determination that an action associated with an event has occurred. Example actions associated with an event include a user of the computer system arriving at the event, the event starting, the computer system receiving a signal (e.g., **614**, a Wi-Fi signal, an NFC signal, a beacon signal) that includes data representing information about the event, and/or computer system **600** receiving data indicating that the watch face (e.g., **620**) is available to be added to computer system **600**. In some embodiments, the watch face is available to others at the event (e.g., anyone at the event within the threshold proximity to the predetermined location **606** that has a compatible device can add the watch face to their device).

FIG. **6**B illustrates a method for adding watch face **620** to computer system **600**. In FIG. **6**B, computer system **600** displays, via display generation component **602**, user interface **616** that includes notification **618** associated with watch face **620**. Computer system **600** can display notification **618** based on (e.g., in response to) a determination that a triggering condition, e.g., as described above, is satisfied. In some embodiments, notification **618** includes a visual representation of watch face **620** with which notification **618** is associated. In FIG. **6**B, notification **618** includes a representation **622** of watch face **620**, where representation **622** includes watch face **620** at a reduced size, and affordance **624** for adding watch face **620** to computer system **600**.

In FIG. **6**B, computer system **600** receives (e.g., detects) input **626***a* corresponding to selection of notification **618** associated with watch face **620**. In FIG. **6**B, input **626***a* is on affordance **624**. In response to detecting input **626***a*, computer system **600** initiates a process for adding watch face **620** to computer system **600**. Similarly, in some embodiments, other watch faces (e.g., **638**, **644**, **646**, **648**) that include content related to an event can be added to computer system **600** in a like manner. In some embodiments, user interface **616** includes affordance **630** (e.g., close, exit, cancel) for ceasing to display user interface **616**.

In FIG. **6**C, in response to detecting input **626***a*, computer system **600** displays, via display generation component **602**, watch face **620**. In some embodiments, in response to detecting input **626***a*, watch face **620** is added to computer system **600** (e.g., watch face **620** is stored in memory of computer system **600** or an account (e.g., a user account) associated with computer system **600**). In FIG. **6**C, user interface watch face **620** includes indication of time **632** and content related to the event, such as a background image of hot air balloons and text identifying the event (e.g., the name of the event).

In some embodiments, in response to detecting input **626***a*, watch face **620** is set as a current watch face for computer system **600**. In some embodiments, in response to detecting input **626***a*, watch face **620** is added (e.g., stored) to a library, set, or collection of watch faces available to computer system **600** (e.g., but is not set as the current watch face for computer system **600**). In some embodiments, the process for adding watch face **620** to computer system **600** includes displaying a set of one or more user interfaces (e.g., after displaying user interface **616**) and/or detecting a set of one or more inputs (e.g., after detecting input **626***a*).

FIGS. **6**D-**6**F illustrate techniques and user interfaces for redeeming a pass (e.g., a ticket) to an event and adding to computer system **600** a watch face that includes content related to the event for which the pass was redeemed. In FIG. **6**D, computer system **600** displays, via display generation component **602**, user interface **636**, which includes pass **638** (e.g., an electronic ticket) to a fashion show. Pass **638** can include information **640** related to an event, such as event details (e.g., the name, address, date and/or time of an event). In FIG. **6**D, pass **638** includes data **642** that can be scanned for entry to the event (e.g., a barcode, a QR code). In some embodiments, pass **638** includes a digital ticket that is redeemable for entry to the event. In some embodiments, user interface **636** includes affordance **644** for ceasing to display pass **638** (e.g., close, exit, cancel). In some embodiments, user interface **636** includes an indication of time **646**.

In FIG. **6**D, scanner **648** scans pass **638**. In some embodiments, scanner **648** scans (e.g., wirelessly) data **642** corresponding to pass **638**. In some embodiments, device **600** must be within a threshold proximity of scanner **648** in order for pass **638** to be scanned. In some embodiments, in

response to redeeming pass **638**, computer system **600** is enabled to add a particular watch face associated with the event to computer system **600**.

In FIG. **6**E, in response to redeeming pass **638**, computer system **600** displays, via display generation component **602**, user interface **650**. User interface **650** includes an indication **652** (e.g., text) that a watch face related to the event is available to be added to computer system **600** and affordance **654** for redeeming (e.g., adding) a watch face on computer system **600**.

In FIG. **6**E, computer system **600** receives (e.g., detects) input **626***c* (e.g., a touch input on affordance **654**) corresponding to a request to redeem the watch face for the event. In response to detecting input **626***c*, computer system **600** adds watch face **658**, which includes content related to the fashion show, to computer system **600**, as illustrated in FIG. **6**F.

FIG. **6**F illustrates computer system **600** displaying, via display generation component **602**, watch face **658** that includes content **660** related to the fashion show corresponding to pass **638**. Watch face **658** includes indication of time **634** and an image (e.g., a background image) that is indicative of the fashion show.

FIGS. **6**G-**6**I illustrate exemplary watch faces that include content related to an event. FIG. **6**G illustrates computer system **600** displaying, via display generation component **602**, watch face **664** that includes indication of time **668** and content **666** related to a sporting event. In particular, watch face **664** includes content related to a team (e.g., the "Dogs") winning a championship (e.g., "2020 Champions"), with an image or logo of the winning team. Watch face **664** can be added to and/or displayed by computer system **600** using techniques analogous to some or all of the techniques described with reference to FIGS. **6**A-**6**F.

FIG. **6**H illustrates computer system **600** displaying, via display generation component **602**, watch face **670** that includes indication of time **674** and content **672** (e.g., image(s) and/or text) related to an opening of a store (e.g., a lighting store called "Mega Lamps"). Watch face **670** can be added to and/or displayed by computer system **600** using techniques analogous to some or all of the techniques described with reference to FIGS. **6**A-**6**F.

FIG. **6**I illustrates computer system **600** displaying, via display generation component **602**, watch face **676** that includes indication of time **680** and content **678** (e.g., image(s), text, and/or complication(s)) related to a music festival (e.g., a music festival called "Fall Music Festival"). In some embodiments, complication **656** on watch face **676** corresponds to an application that provides information for the event related to watch face **676**. For example, selecting complication **656** can launch an application that provides a schedule of performances for the Fall Music Festival. In some embodiments, complication **656** displays information related to the event of watch face **676** (e.g., text and/or image(s) indicating an artist that is currently performing), and the information displayed by complication **656** can be updated as the information related to the event changes. Watch face **676** can be added to and/or displayed by computer system **600** using techniques analogous to some or all of the techniques described with reference to FIGS. **6**A-**6**F.

In FIG. **6**I, computer system **600** receives (e.g., detects) input **626***d*. In some embodiments, input **626***d* corresponds to a request to enter a different operational mode of computer system **600** (e.g., a watch face selection mode and/or a menu mode with options for performing actions associated with watch face **676**). In some embodiments, input **626***d* includes a touch input on display generation component **602** (e.g., a tap and hold gesture on watch face **676**.

In response to detecting input **626***d*, computer system **600** initiates a process for sharing and/or editing watch face **676**. In FIG. **6**J, in response to detecting input **626***d*, computer system **600** displays, via display generation component **602**, user interface **684**, which includes representation **686** of watch face **676** (e.g., a representation of watch face **676** that is smaller than watch face **676**), affordance **688** for sharing watch face **676**, and affordance **690** for editing watch face **676**. In FIG. **6**J, computer system **600** receives (e.g., detects) input **626***e* on affordance **690** for editing watch face **676**. In response to detecting input **626***e* on affordance **690**, computer system **600** displays, via display generation component **602**, a user interface for editing watch face **676**, as illustrated in FIG. **6**K.

In FIG. **6**K, user interface **694** displays header **698** and a representation of watch face **676** (e.g., including indication of time **680**, content **678**, and complication **656**) while visually indicating element **696** (e.g., a representation of complication **656**) to indicate that element **696**) is currently selected for editing. In some embodiments, visually indicating element **696** includes altering the color of element **696** and/or displaying a visual element to distinguish element **696** from other elements (e.g., a bolded outline). Header **698** indicates the feature of the watch face currently selected for editing (e.g., color, complications). In FIG. **6**K, header **698** indicates that complications are currently selected for editing. In some embodiments, the element selected for editing (e.g., the visually indicated element) can be edited in response to user input. For example, in response to detecting user input (e.g., a rotation of rotatable and depressible input device **628** or a vertical swipe gesture on display generation component **602**) while displaying user interface **694** as shown in FIG. **6**K, computer system **600** changes the information (e.g., an application) displayed by or corresponding to complication **656**. In some embodiments, in response to detecting user input (e.g., a tap gesture on complication **656** or a press of rotatable and depressible input device **628**) while displaying user interface **694** as shown in FIG. **6**K, computer system **600** displays a list of selectable options of information (e.g., applications) that can be displayed at complication **656**.

In FIG. **6**K, computer system **600** receives (e.g., detects) input **626***f* on user interface **694**. In some embodiments, input **626***f* corresponds to a request to select a different feature for editing. In FIG. **6**K, input **626***f* includes a directional touch gesture (e.g., a horizontal swipe) on display generation component **602**. In response to detecting input **626***f*, computer system **600** displays, via display generation component **602**, a user interface for editing a different element of the watch face, as illustrated in FIG. **6**L below.

In FIG. **6**L, in response to receiving (e.g., detecting) input **626***f* in FIG. **6**K, computer system **600** displays, via display generation component **602**, user interface **677** for editing a color of watch face **676**. User interface **677** includes a different header (or a different portion of header **698**) than was displayed in FIG. **6**K. In FIG. **6**L, header **698** indicates a color of watch face **676** (e.g., a background color, a color of indication of time **680**, a color of content **678**, a color of complication **656**) is currently selected for editing. In some embodiments, transitioning from displaying a first portion of header **698** (as illustrated in FIG. **6**K) to displaying a second portion of header **698** (as illustrated in FIG. **6**L) includes animating header **698** across a display (e.g., visually depicting the header as moving or sliding). User interface **677**

includes positional indicator **679** that indicates the position of a currently selected option in a series of options for the element of watch face **676** that is currently selected for editing. In FIG. **6**L, positional indicator **679** indicates the position of a currently selected color of watch face **676** in a series of color options. Positional indicator **679** indicates that a user can cycle through options available for editing the watch face element currently being edited. In some embodiments, a positional indicator is displayed in user interface **694** of FIG. **6**K corresponding to options for information that can be selected for complication **656**.

In some embodiments, in response to detecting input (e.g., a press of rotatable and depressible input device **628**, a tap on display generation component **602**, a movement gesture corresponding to a user putting down his or her wrist) while in an editing mode (e.g., while displaying user interface **694** in FIG. **6**K or user interface **677** in FIG. **6**L), computer system **600** displays (e.g., returns to) user interface **684** shown in FIG. **6**J or the currently selected watch face (e.g., watch face **676** as shown in FIG. **6**I). In some embodiments, in response to detecting input (e.g., a press of rotatable and depressible input device **628**, a tap on display generation component **602**, a movement gesture corresponding to a user putting down his or her wrist) while displaying user interface **684** in FIG. **6**J, computer system **600** displays (e.g., returns to) the currently selected watch face (e.g., watch face **676** as shown in FIG. **6**I).

In some embodiments, computer system **600** can be used to share a watch face related to an event that has been added to computer system **600**, e.g., with other devices and/or users (e.g., user accounts). For example, in response to detecting input corresponding to a request to share a watch face computer system **600** can initiate a process for selecting a recipient (e.g., a device, a user, a user account) and/or a communication method (e.g., text message, instant message, email, social media platform) for transmitting information representing the watch face to the recipient. For example, in response to detecting a touch input on affordance **688** for sharing in FIG. **6**J, computer system **600** can initiate a process that includes displaying a user interface for selecting a recipient (e.g., a contactable user application) and/or a user interface for selecting a communication method (e.g., a menu of communication methods) for providing information representing watch face **676**.

In some embodiments, a watch face related to an event cannot be shared and/or cannot be edited. In some embodiments, in response to detecting an input corresponding to a request to share and/or edit a watch face, computer system **600** does not initiate a process for sharing and/or editing the watch face, initiates a process for sharing but not editing the watch face, or initiates a process for editing but not sharing the watch face.

For example, returning to FIG. **6**C, in response to detecting input **626***b* (e.g., a touch gesture, a tap and hold gesture) while displaying watch face **620**, computer system **600** displays, via display generation component **602**, user interface **681**, as illustrated in FIG. **6**M. User interface **681** includes representation **683** of watch face **620** (e.g., a reduced size representation of watch face **620**), graphical element **682**, and graphical element **692**. Graphical element **682** and graphical element **692** are similar to (e.g., in the same positions as) affordance **688** and affordance **690**, respectively, in user interface **684** of FIG. **6**J, but include a visual indication (e.g., are de-emphasized, greyed out, dimmed, blurred, and/or crossed out) to indicate that watch face **620** cannot be shared or edited (e.g., graphical element **682** and graphical element **692** are not selectable to initiate processes for sharing and editing, respectively, watch face **620**). In some embodiments, when a watch face is not sharable, computer system **600** forgoes displaying an option for sharing the watch face (e.g., graphical element **682** or affordance **688** is not displayed). Similarly, in some embodiments, when a watch face is not editable, the computer system **600** forgoes displaying an option for editing a watch face (e.g., graphical element **692** or affordance **690** is not displayed).

In some embodiments in which a watch face is shareable and not editable, graphical element **682** for sharing a watch face is selectable, and graphical element **692** for editing is not selectable or not displayed. In some embodiments in which a watch face is editable and not sharable, graphical element **682** for sharing is not selectable or not displayed, and graphical element **692** for editing is selectable.

FIG. **7** is a flow diagram illustrating a method for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on a computer system in accordance with some embodiments. Method **700** is performed at a computer system (e.g., **100**, **300**, **500**, **600**) with a display generation component (e.g., **112**, **340**, **602**) and one or more input devices (e.g., **112**, **506**, **508**, **628**). Some operations in method **700** are, optionally, combined, the orders of some operations are, optionally, changed, and some operations are, optionally, omitted.

As described below, method **700** provides an intuitive way for obtaining a user interface (e.g., a watch face) that includes content related to an event for display on a computer system. The method reduces the cognitive burden on a user for obtaining a user interface (e.g., a watch face; e.g., **620**, **658**, **664**, **670**, **676**) that includes content related to an event for display on a computer system, thereby creating a more efficient human-machine interface. For battery-operated computing systems, enabling a user to obtain user interfaces faster and more efficiently conserves power and increases the time between battery charges.

While (**702**) the computer system (e.g., **600**) (e.g., an electronic device; a smart device, such as a smartphone or a smartwatch; a mobile device; a wearable device) is within a threshold proximity to a predetermined location (e.g., **606**) (e.g., a location of an event, a location of a kiosk at an event) (e.g., the computer system is determined to be within a threshold proximity of a predetermined location (e.g., **606**) (e.g., via GPS, Wi-Fi, cellular signal(s)); the computer system is within a range of an external device (e.g., a transmitter) that enables the computer system to receive a communication signal transmitted by the external device, such as a Bluetooth signal, a near field communication signal, a Wi-Fi signal, etc.), where the predetermined location is associated with an event (e.g., the computer system is determined to be at a location of an event; the computer system is located within wireless communication range of an external device (e.g., a transmitter) located at the event) (e.g., the event includes a sporting match or game, a concert, a music festival, an art show, a store opening, a parade, a festival, and/or a celebration of a holiday): in accordance with (e.g., in response to) a determination that a triggering condition is satisfied, where the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred (e.g., a predetermined action (not all actions result in the triggering condition being satisfied), an event starting, an event ending, and/or a team playing a game/match at the event venue winning), the computer system (e.g., **600**) displays (**704**) (e.g., via display generation component **602**) a notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**) (e.g., a pop-up notifi-

cation and/or a message notification) associated with a watch face (e.g., **620**, **658**, **664**, **670**, **676**) that includes content (e.g., **630**, **660**, **666**, **672**, **678**) (e.g., an image, information) related to the event (e.g., a watch face that is related to an artist at the event venue, a watch face including details related to the event, a watch face including a logo of a team playing a game/match (e.g., the winning team) at the event venue, and/or a watch face that is otherwise not available within a watch face gallery of the computer system and/or an additional external device in communication with the computer system).

In some embodiments, while the computer system is within a threshold proximity to a predetermined location (e.g. **606**), where the predetermined location is associated with an event, in accordance with (e.g., in response to) a determination that a triggering condition is not satisfied, the computer system (**600**) forgoes (**706**) displaying the notification (e.g. **618**, **622**, **624**, **650**, **652**, **654**).

In some embodiments, while the computer system is displaying the notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**), the computer system detects (**708**) via the one or more input devices, an input (e.g. **626***a*, **626***c*) (e.g., a tap gesture on the notification, a sequence of tap gestures on the notification, and/or a tap gesture on an "Add Watch Face" or "Redeem Now" affordance of the notification) corresponding to selection of the notification.

In some embodiments, in response to detecting the input (e.g., **626***a*, **626***c*) corresponding to the selection of the notification (e.g. **618**, **622**, **624**, **650**, **652**, **654**) (e.g., a tap gesture on the notification, a sequence of tap gestures on the notification, and/or a tap gesture on an "Add Watch Face" affordance of the notification), the computer system initiates (**710**) a process for adding the watch face to the computer system. (e.g., adding the watch face as an active and/or selected watch face displayed by the computer system).

In some embodiments, the watch face (e.g., **620**, **658**, **664**, **670**, **676**) is added to the computer in response to detecting the input (e.g., **626***a*, **626***c*) corresponding to selection of the notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**). In some embodiments, adding the watch face to the computer system adds the watch face to a watch face gallery of the computer system and/or a watch face gallery of an additional external device (e.g., a smartphone or watch) in communication with the computer system (e.g., a watch in communication with a smartphone). In some embodiments, adding the watch face to the computer system does not add the watch face to the watch face gallery. In some embodiments, adding the watch face to the computer system causes the watch face to be displayed as the active and/or selected watch face for a temporary period of time before displaying a default or last used watch face (e.g., **604**) on the computer system.

In some embodiments, an external device (e.g., **610**) (e.g., a server, a kiosk at the event) receives data that indicates that the action has occurred, and in response (and/or in accordance with a determination that the action has occurred), sends data associated with the watch face (e.g., **620**, **658**, **664**, **670**, **676**) to the computer system (e.g. **600**). In some embodiments, the data associated with the watch face includes an alert (e.g., **618**, **622**, **624**, **650**, **652**, **654**) that the watch face is available to be added to the computer system (e.g., without including a representation of the watch face). In some embodiments, the data that represents the watch face includes a representation of the watch face (e.g., an image of the watch face, data that identifies graphical elements and/or features of the watch face (e.g., color(s), style(s), time indicator(s), complications, background(s))).

In some embodiments, the computer system (e.g. **600**) displays the notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**) in response to receiving the data associated with the watch face from the external device (e.g. **610**). In some embodiments, the computer system obtains (e.g., downloads) a representation of the watch face in response to detecting the input corresponding to selection of the notification. Displaying a notification associated with a watch face that includes content related to an event when prescribed conditions are met allows the user to quickly recognize that the watch face is available, and enables the user to act on the availability of the watch face by, e.g., adding the watch face to the computer system without the need to navigate additional user interfaces. Performing an optimized operation when a set of conditions has been met without requiring further user input enhances the operability of the computer system and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the computer system) which, additionally, reduces power usage and improves battery life of the computer system by enabling the user to use the computer system more quickly and efficiently. Forgoing display of a notification associated with a watch face that includes content related to an event when prescribed conditions are not met enables the user to continue using the device without unnecessary distraction, and avoids using resources to display a notification that would not be applicable based on the triggering conditions not being met. Performing an operation when a set of conditions has been met without requiring further input enhances the operability of the computer system and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the computer system) which, additionally, reduces power usage and improves battery life of the computer system by enabling the use to use the computer system more quickly and efficiently.

In some embodiments, the event includes a sports game (e.g., baseball game, basketball game, football game (e.g., the Super Bowl), soccer match (e.g., the World Cup), tennis match, golf match, E-sports; a professional event, an amateur (e.g., collegiate) event). In some embodiments, the action associated with the event includes a team winning, a team or player scoring, a player performing a predetermined action (e.g., hitting a home run, scoring a touchdown), a team winning a championship, a game beginning, a game ending.

In some embodiments, the event includes a store opening (e.g., a store opening at a particular time (8:00 A.M.); the grand opening of a particular store location; a store reopening; an online store launching).

In some embodiments, the event includes a music festival (e.g., Outside Lands, Ultra, Coachella, Lollapalooza, Hardly Strictly Bluegrass).

In some embodiments, the triggering condition is not satisfied if a current time is a predetermined time after the event has ended (e.g., immediately after the event is over, a predetermined amount of time after the event has ended (e.g., 15 minutes, 30 minutes, 1 hour, 2 hours, one day)). For example, if a user attempts to obtain a watch face that includes content related to the event (e.g., by scanning a ticket, approaching a kiosk, or selecting the notification) at the predetermined time after the event, the process for adding the watch face to the computer system is not initiated (e.g., the computer system forgoes initiating the process for adding the watch face to the computer system). Determining that the triggering condition is not satisfied if a current time

is a predetermined time after the event has ended enables the computer system to restrict display of the notification associated with the watch face to times that are more relevant to the watch face and conserves computer resources by avoiding display of the notification after the event has ended, at which time the notification may not be relevant. Performing an operation when a set of conditions has been met without requiring further input enhances the operability of the computer system and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the computer system) which, additionally, reduces power usage and improves battery life of the computer system by enabling the use to use the computer system more quickly and efficiently.

In some embodiments, the watch face (e.g., **620**, **658**, **664**, **670**, **676**) is a first watch face (e.g., **620**) and, after adding the first watch face to the computer system (e.g., **600**) and while the computer system is in a first operational mode (e.g., normal operational mode, watch face selection mode, watch face editing mode), the computer system receives a request (e.g., **626***b*, **626***d*) to display a user interface with an option for sharing a watch face. In some embodiments, in response to receiving the request to display the user interface, in accordance with a determination that the request (e.g., **626***d*) to display the user interface is a request to display a user interface for a second watch face (e.g., **604**, **676**) that is different from the first watch face (e.g., **620**), the computer system (e.g., **600**) displays a first user interface (e.g., **684**) that includes a representation (e.g., **686** in FIG. **6**J) of the second watch face, where the first user interface provides an ability (e.g., **688**) to initiate a process for transmitting a representation of the second watch face to another device (e.g., in response to a user performing a predetermined type of input while the second watch face is displayed (e.g., a long press on the watch face), a watch face selection screen including a share affordance (e.g., **688**) can be displayed; the watch face selection screen can also include a visual representation of a watch face (e.g., the second watch face at a reduced size); selecting the share affordance can cause a user interface for selecting a recipient of the second watch face to be displayed). In some embodiments, in response to receiving the request to display the user interface, in accordance with a determination that the request to display the user interface is a request (e.g., **626***c*) to display a user interface for the first watch face (e.g., **620**), the computer system (e.g., **600**) displays a second user interface (e.g., **681**) that includes a representation of the first watch face (e.g., **683**, where the second user interface does not provide an ability to initiate a process for transmitting a representation of the first watch face to another device (e.g., while in the face selection mode and the first watch face is selected (e.g., in focus, in the center of the display), a share affordance is not displayed, or is displayed with a visual indication that sharing is disabled (e.g., grayed out, displayed with a line, an x, or cross-hatching through it); a disabled/grayed out share affordance may be concurrently displayed with the first watch face at a reduced size). Displaying a first user interface with a representation of a second watch face with the ability to initiate a process for transmitting a representation of the second watch face to another device provides the user with feedback that the second watch face may be shared while deciding whether to initiate the process for transmitting the representation of the second watch face to another device. Providing improved visual feedback to the user enhances the operability of the system and makes the computer system more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the system more quickly and efficiently. Displaying a second user interface with a representation of the first watch face without providing an ability to initiate a process for transmitting the representation of the first watch face to another device provides the user with feedback that the representation of the first watch face, in contrast to the representation of the second watch face, cannot be shared with another device. Providing improved visual feedback to the user enhances the operability of the system, and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the device more quickly and efficiently.

In some embodiments, the determination that the triggering condition is satisfied includes a determination that a user of the computer system (e.g. **600**) has arrived at the event (e.g., the computer system is geographically located within a threshold distance from an entry point of the event (using GPS); a ticket/pass (e.g., **638**) associated with the event has been scanned; the device detects a signal (e.g., **614**) corresponding to the user arriving at event; the computer system connects to a Wi-Fi network at the event). In some embodiments, the action associated with the event includes (e.g., is) an indication that the user of the computer system has arrived at the event. Including a determination that a user of the computer system has arrived at the event in the determination that the triggering condition is satisfied allows the system to provide the user with visual feedback regarding the availability of a watch face that includes content related to the event by displaying a notification (e.g. **618**) associated with the watch face (e.g., **620**, **658**, **664**, **670**, **676**) to the computer system) at a contextually relevant time (e.g., when the user arrives at the event). Providing improved visual feedback to the user enhances the operability of the system, and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the device more quickly and efficiently.

In some embodiments, the determination that the triggering condition is satisfied includes a determination that the event is starting (e.g., the time at which the event is scheduled to start is a current time or is within a predetermined amount of time from the current time; a signal (e.g., **614**) indicating the event is beginning is detected). Including a determination that an event is starting in the determination that the triggering condition is satisfied allows the system to provide the user with visual feedback regarding the availability of a watch face (e.g., **620**, **658**, **664**, **670**, **676**) that includes content related to the event by displaying a notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**) associated with the watch face at a contextually relevant time (e.g., when the event is starting). Providing improved visual feedback to the user enhances the operability of the system, and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the device more quickly and efficiently.

In some embodiments, the determination that the triggering condition is satisfied includes a determination that the computer system (e.g. **600**) has received a signal (e.g., **614**) (e.g., a Wi-Fi signal, NFC signal, beacon signal) including data representing information about the event (e.g., a sports team winning, a sports team scoring, a song playing at a concert, a model appearing at a fashion show). Including a determination that the computer system has received a signal including data representing information about the event in the determination that the triggering condition is satisfied allows the system to provide the user with visual feedback regarding the availability of a watch face that includes content related to the event by displaying a notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**) associated with the watch face (e.g., **620**, **658**, **664**, **670**, **676**) at a contextually relevant time (e.g., when the computer system receives a signal including data representing information about the event, which may be at a particular time during the event (e.g., the start of the event, the end of the event, or when a certain sub-event occurs)). Providing improved visual feedback to the user enhances the operability of the system, and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the device more quickly and efficiently.

In some embodiments, determining that the triggering condition is satisfied includes a determination that a pass (e.g., **638**) (e.g. a ticket that provides access to an event, such a concert ticket, a sporting event ticket, or a movie ticket; In some embodiments, the pass is stored and/or displayed in a wallet application of the computer system) has been redeemed (e.g., scanned). In some embodiments, the action associated with the event includes (e.g., is) redeeming the pass (e.g., FIG. **6**D) (e.g., the determination that the action associated with the event has occurred includes a determination that the pass has been redeemed). In some embodiments, the triggering condition is satisfied when the computer system determines that the pass has been redeemed (e.g., receives information indicating that the pass has been redeemed). In some embodiments, the notification (e.g., **618**, **622**, **624**, **650**, **652**, **654**) associated with the watch face (e.g., **620**, **658**, **664**, **670**, **676**) that includes content (e.g., **630**, **660**, **666**, **672**, **678**) related to the event is displayed in response to redeeming the pass. In some embodiments, in response to redeeming the pass, the computer system provides a confirmation (e.g., **650**) that the pass has been redeemed (e.g., a visual indication (e.g., checkmark, thumbs up) or audible indication (e.g., a chime is played) that lets the user know that the pass was successfully redeemed/scanned). Including a determination that an event is starting in the determination that the triggering condition is satisfied allows the system to provide the user with visual feedback regarding the availability of a watch face that includes content related to the event by displaying a notification associated with the watch face at a contextually relevant time (e.g., when the event is starting). Providing improved visual feedback to the user enhances the operability of the system, and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the device more quickly and efficiently.

In some embodiments, the determination that the triggering condition is satisfied includes a determination that the computer system (e.g., **600**) has received data (e.g., **614**) (e.g., a signal being broadcast at the event; a signal accessible by the computer system via a physical object (e.g., **610**) at the event, such as a kiosk, event signage, a point of sale) indicating that the watch face (e.g., **620**, **658**, **664**, **670**, **676**) is available to be added to the computer system, where the data indicating that the watch face is available to be added to the computer system is available to other computer systems that are within the threshold proximity to the predetermined location (e.g., **606**) (e.g., other attendees of the event can also receive the data at their devices after receiving data indicating that the watch face is available via, e.g., a signal being broadcast at the event or a physical object at the event (e.g., a kiosk)). Including a determination that the computer system has received data indicating that the watch face is available to be added to the computer system, wherein the data indicating that the watch face is available to be added to the computer system is available to other computer systems that are within the threshold proximity to the predetermined location, in the determination that the triggering condition is satisfied allows the system to provide the user with visual feedback regarding the availability of a watch face that includes content related to the event by displaying a notification associated with the watch face at a contextually relevant time that may be the same time as other attendees at the event (e.g., the notification associated with the watch face may be displayed on the computer systems of all event attendees (e.g., audience members) at the same time, thus allowing the event attendees to become aware of the availability of the watch face that includes content related to the event around the same time). Providing improved visual feedback to the user enhances the operability of the system, and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the system) which, additionally, reduces power usage and improves battery life of the device by enabling the user to use the device more quickly and efficiently.

In some embodiments, in accordance with (e.g., in response to) the determination that the triggering condition is not satisfied, the computer system (e.g., **600**) provides a process for adding the watch face (e.g., **620**, **658**, **664**, **670**, **676**) to the computer system (e.g., the computer system may not add the watch face from a server where other watch faces are available if the triggering condition is not met) (e.g., a computer system that is at the event (based on e.g., GPS coordinates being within a threshold region) but does not satisfy other required aspect(s) of the triggering condition (e.g., the computer system does not have a corresponding pass (e.g., **638**), the computer system has not received data indicating that an event pass has been scanned) may not provide a process for adding the watch face). Forgoing providing a process for adding the watch face to a device when prescribed conditions are not met allows the computer system to conditionally restrict access to certain processes and enables the user to continue using the computer system without being distracted by information about unavailable processes. Performing an operation when a set of conditions has been met without requiring further input enhances the operability of the computer system and makes the user-system interface more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the computer system) which, additionally, reduces power usage and improves battery life of the computer system by enabling the use to use the computer system more quickly and efficiently.

The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the techniques and their practical applications. Others skilled in the art are thereby enabled to best utilize the techniques and various embodiments with various modifications as are suited to the particular use contemplated.

Although the disclosure and examples have been fully described with reference to the accompanying drawings, it is to be noted that various changes and modifications will become apparent to those skilled in the art. Such changes and modifications are to be understood as being included within the scope of the disclosure and examples as defined by the claims.

What is claimed is:

1. A computer system configured to communicate with a display generation component and one or more input devices, comprising:

one or more processors; and

memory storing one or more programs configured to be executed by the one or more processors, the one or more programs including instructions for:

while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event:

in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; and

in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification;

while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and

in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

2. The computer system of claim **1**, wherein the event includes a sports game.

3. The computer system of claim **1**, wherein the event includes a store opening.

4. The computer system of claim **1**, wherein the event includes a music festival.

5. The computer system of claim **1**, wherein the triggering condition is not satisfied if a current time is a predetermined time after the event has ended.

6. The computer system of claim **1**, wherein the watch face is a first watch face, and wherein the one or more programs further include instructions for:

after adding the first watch face to the computer system and while the computer system is in a first operational mode, receiving a request to display a user interface with an option for sharing a watch face; and

in response to receiving the request to display the user interface:

in accordance with a determination that the request to display the user interface is a request to display a user interface for a second watch face that is different from the first watch face, displaying a first user interface that includes a representation of the second watch face, wherein the first user interface provides an ability to initiate a process for transmitting a representation of the second watch face to another device; and

in accordance with a determination that the request to display the user interface is a request to display a user interface for the first watch face, displaying a second user interface that includes a representation of the first watch face, wherein the second user interface does not provide an ability to initiate a process for transmitting a representation of the first watch face to another device.

7. The computer system of claim **1**, wherein the determination that the triggering condition is satisfied includes a determination that a user of the computer system has arrived at the event.

8. The computer system of claim **1**, wherein the determination that the triggering condition is satisfied includes a determination that the event is starting.

9. The computer system of claim **1**, wherein the determination that the triggering condition is satisfied includes a determination that the computer system has received a signal including data representing information about the event.

10. The computer system of claim **1**, wherein determining that the triggering condition is satisfied includes a determination that a pass has been redeemed.

11. The computer system of claim **1**, wherein the determination that the triggering condition is satisfied includes a determination that the computer system has received data indicating that the watch face is available to be added to the computer system, wherein the data indicating that the watch face is available to be added to the computer system is available to other computer systems that are within the threshold proximity to the predetermined location.

12. The computer system of claim **1**, wherein the one or more programs further include instructions for:

in accordance with the determination that the triggering condition is not satisfied, forgoing providing a process for adding the watch face to the computer system.

13. A non-transitory computer-readable storage medium storing one or more programs configured to be executed by one or more processors of a computer system that is in communication with a display generation component and one or more input devices, the one or more programs including instructions for:

while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event:

in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; and

in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification;

while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and

in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

14. The non-transitory computer-readable storage medium of claim 13, wherein the event includes a sports game.

15. The non-transitory computer-readable storage medium of claim 13, wherein the event includes a store opening.

16. The non-transitory computer-readable storage medium of claim 13, wherein the event includes a music festival.

17. The non-transitory computer-readable storage medium of claim 13, wherein the triggering condition is not satisfied if a current time is a predetermined time after the event has ended.

18. The non-transitory computer-readable storage medium of claim 13, wherein the watch face is a first watch face, and wherein the one or more programs further include instructions for

after adding the first watch face to the computer system and while the computer system is in a first operational mode, receiving a request to display a user interface with an option for sharing a watch face; and

in response to receiving the request to display the user interface:

in accordance with a determination that the request to display the user interface is a request to display a user interface for a second watch face that is different from the first watch face, displaying a first user interface that includes a representation of the second watch face, wherein the first user interface provides an ability to initiate a process for transmitting a representation of the second watch face to another device; and

in accordance with a determination that the request to display the user interface is a in accordance with a determination that the request to display the user interface is a request to display a user interface for the first watch face, displaying a second user interface that includes a representation of the first watch face, wherein the second user interface does not provide an ability to initiate a process for transmitting a representation of the first watch face to another device.

19. The non-transitory computer-readable storage medium of claim 13, wherein the determination that the triggering condition is satisfied includes a determination that a user of the computer system has arrived at the event.

20. The non-transitory computer-readable storage medium of claim 13, wherein the determination that the triggering condition is satisfied includes a determination that the event is starting.

21. The non-transitory computer-readable storage medium of claim 13, wherein the determination that the triggering condition is satisfied includes a determination that the computer system has received a signal including data representing information about the event.

22. The non-transitory computer-readable storage medium of claim 13, wherein determining that the triggering condition is satisfied includes a determination that a pass has been redeemed.

23. The non-transitory computer-readable storage medium of claim 13, wherein the determination that the triggering condition is satisfied includes a determination that the computer system has received data indicating that the watch face is available to be added to the computer system, wherein the data indicating that the watch face is available to be added to the computer system is available to other computer systems that are within the threshold proximity to the predetermined location.

24. The non-transitory computer-readable storage medium of claim 13, wherein the one or more programs further include instructions for:

in accordance with the determination that the triggering condition is not satisfied, forgoing providing a process for adding the watch face to the computer system.

25. A method, comprising:

at a computer system that is in communication with a display generation component and one or more input devices:

while the computer system is within a threshold proximity to a predetermined location, wherein the predetermined location is associated with an event:

in accordance with a determination that a triggering condition is satisfied, wherein the determination that the triggering condition is satisfied includes a determination that an action associated with the event has occurred, displaying a notification associated with a watch face that includes content related to the event; and

in accordance with a determination that the triggering condition is not satisfied, forgoing display of the notification;

while displaying the notification, detecting, via the one or more input devices, an input corresponding to selection of the notification; and

in response to detecting the input corresponding to selection of the notification, initiating a process for adding the watch face to the computer system.

26. The method of claim 25, wherein the event includes a sports game.

27. The method of claim 25, wherein the event includes a store opening.

28. The method of claim 25, wherein the event includes a music festival.

29. The method of claim 25, wherein the triggering condition is not satisfied if a current time is a predetermined time after the event has ended.

30. The method of claim 25, wherein the watch face is a first watch face, the method further comprising:

after adding the first watch face to the computer system and while the computer system is in a first operational mode, receiving a request to display a user interface with an option for sharing a watch face; and

in response to receiving the request to display the user interface:

in accordance with a determination that the request to display the user interface is a request to display a user interface for a second watch face that is different from the first watch face, displaying a first user interface that includes a representation of the second watch face, wherein the first user interface provides an ability to initiate a process for transmitting a representation of the second watch face to another device; and

in accordance with a determination that the request to display the user interface is a in accordance with a determination that the request to display the user interface is a request to display a user interface for the first watch face, displaying a second user interface that includes a representation of the first watch face, wherein the second user interface does not

provide an ability to initiate a process for transmitting a representation of the first watch face to another device.

31. The method of claim **25**, wherein the determination that the triggering condition is satisfied includes a determination that a user of the computer system has arrived at the event.

32. The method of claim **25**, wherein the determination that the triggering condition is satisfied includes a determination that the event is starting.

33. The method of claim **25**, wherein the determination that the triggering condition is satisfied includes a determination that the computer system has received a signal including data representing information about the event.

34. The method of claim **25**, wherein determining that the triggering condition is satisfied includes a determination that a pass has been redeemed.

35. The method of claim **25**, wherein the determination that the triggering condition is satisfied includes a determination that the computer system has received data indicating that the watch face is available to be added to the computer system, wherein the data indicating that the watch face is available to be added to the computer system is available to other computer systems that are within the threshold proximity to the predetermined location.

36. The method of claim **25**, further comprising:

in accordance with the determination that the triggering condition is not satisfied, forgoing providing a process for adding the watch face to the computer system.

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